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Office of Management Information Systems
Executive Office of Administration and Finance

# TRANSITION REPORT

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# TRANSITION REPORT

## II. Agency Status - As of January, 1983
(A Retrospective Analysis)

**1982 Transition Report.** OMIS has changed significantly during the past eight years. A number of the old problems have been solved. Some new ones have emerged. OMIS's late 1982 transition report did a good job presenting OMIS's status as of January, 1983.

**Reported Problems.** The 1982 report emphasized eight problems:

1) a lack of understanding of information technology (IT) by senior administration officials, and a lack of attention to information technology,

2) an inappropriate positioning of OMIS, an ill-defined scope of authority, and a lack of control of IT expenditures,

3) severe staff/personnel problems, and too heavy a dependence on consultants,

4) no adequate automated system in these critical areas:

-personnel
-payroll
-accounting
-vendor payment
-accounts receivable
-capital project management
-criminal justice
-registry of motor vehicles (automobile registration and titling, driver licenses, accident records, suspensions, cash control)

5) no shared, statewide voice and data communications network,

6) no priority setting procedures for OMIS's software development activities,

7) no long range planning,

8) and, finally, with reference to the OMIS data center, little user accountability, and little incentive for efficient use by users of the data center's computer resources.

**Comments on the Reported Problems.**

**1. Understanding/Attention.** In 1983 information technology was not viewed as a major player, and senior managers did not expect it to contribute solutions to the critical problems of reducing costs, providing better service to the state's many "customers", and giving employees new ways to do their jobs more efficiently and effectively. In consequence, little demand was made of it, and its practitioners felt misunderstood and ignored.

**2. Positioning, Authority, Scope, Control.** The administration did not undertake the politically difficult task of defining (or resolving questions about) OMIS's scope of authority, either programmatically or bureaucratically. On paper, the Director of OMIS also served as the Assistant Secretary of EOAF for Systems. As such, he had responsibilities for data processing generally. He was given (delegated) procurement approval authority, but his duties and responsibilities outside OMIS remained vague and/or undefined in many areas.

One area was planning. EOAF adopted its major initiatives with little thought for their data processing requirements. OMIS would then be called upon to assist in the implementation of an initiative for which OMIS had requested neither funds nor personnel.

A second area was the allocation of resources. The governor would submit his budget with almost no input from OMIS or any other technical source. It was only at the point that an agency wanted to

spend appropriated funds that OMIS had input through its procurement review authority. (This way of doing business contrasted significantly from the way that EOAF budgeted for construction projects through DCPO, which was intimately involved in the capital budgeting process.)

A third area was the management of system development projects. If an agency needed a system and the work was to be done by consultants, OMIS would be involved initially, because it had to approve the Request for Proposals (RFP) and the resulting contract. But after the vendor was chosen and the contract signed, OMIS had no responsibility for the technical development work, regardless of its importance or the likely cost of the project. This was also true if the work was to be done by the agency in-house, with its own staff. The result was development efforts that cost ridiculously large sums (some of which received publicity, e.g., CJIS), and yielded little or no usable results even after the large expenditures. (Again this way of doing business contrasted significantly from the way EOAF, through DCPO, administered construction projects. Agencies simply were not allowed to supervise construction projects, major or minor, on their own.)

**3. Personnel Resources.** OMIS was not able to attract or retain enough competent personnel, and in consequence, much of its technical work was done by consultants. Civil service rules, bargaining unit contracts, inflexible personnel schedules and DPA procedures made the Commonwealth a weak contender in a highly competitive market. OMIS, like all agencies, was limited by the general salary schedule to salary levels which were simply uncompetitive. OMIS was also limited to scheduled civil service positions, and thus any increase in salary could only be made as a promotion to a higher position. If none existed, or if none were vacant, the person just had to wait.

OMIS paid a high price for its dependence on consultants. Their hourly rates were high. They set themselves apart from the employees, creating ill feelings. They usually got the most interesting assignments, which further worsened personnel problems. They brought OMIS undesirable attention. They had no commitment to public service or the agency. In short, they became yet another obstacle to retaining the good employees the agency did have.

**4. Statewide Systems.** Although it may seem difficult to believe now, in 1983 the executive branch was a multi-billion dollar enterprise without a single adequate administrative system. Administrative actions (personnel, payroll, purchasing, and vendor payment/accounts payable) were all done via paper forms which agencies submitted to the central agencies in EOAF, and which the central agencies keypunched or sent to outside data entry firms. Error correction was a time consuming process, as the forms had to be returned, retyped, resubmitted, and rekeyed. In consequence, in order to operate, agencies had to keep their own (paper) files, since the central records were difficult to access and usually out-of-date. There was also no standardization. The executive branch alone had over fifty different payrolls, none connected with the central personnel records. A number of them were advance payrolls under which agencies wrote their own paychecks and reconciled with the Comptroller's Office on a post-audit basis.

The lack of adequate automated systems wasn't limited to EOAF. For example, the Registry of Motor Vehicles was ridiculed constantly for its abysmal performance. The Commonwealth was one of the few states without a federally certified Medicaid Management Information System, and Public Safety had spent large sums attempting to implement a Criminal Justice Information System with little result.

In short, in 1983 the executive branch could not point to a single modern information system for its major functions, and its every attempt to create one had had major procurement, implementation and/or contract problems.

**5. Statewide Voice/Data Communications Network.** In 1983, the executive branch had half a dozen large data centers, each in the process of creating its own data network. No one was responsible for coordinating network development, or for achieving efficiency through cooperation. Agency people worried about what was good for their agency, not about what might be best for the Commonwealth as a whole. Further, voice and data communications were administered separately.

**6. Priority Setting.** Demands for OMIS's software services ran significantly ahead of OMIS's resources. Lacking a priority setting

mechanism, OMIS took jobs on a "first come, first served" basis.

**7. Long Range DP Planning.** The unit responsible for technical planning was staffed by people with almost no technical skills and no planning experience.

**8. User Accountability/Service Levels.** OMIS's Data Center provided resources to over forty agencies. These agencies were not charged for the resources they used, and received no report of what those resources cost. There were thus no economic incentive for them to use the data center's resources efficiently. There was no capacity planning, and budgeting for growth was done primarily on the basis of an annual interview with the major users. The budget projections often proved to be wrong, service would deteriorate during the year, and it would take OMIS a long time to get additional funds to fix the problems.

**Unreported Problems.** In addition to these eight reported problems, OMIS had several others:

**9. Data Processing Procurements.** In 1983, the OMIS unit responsible for data processing procurements was a group of 30 "paper-pushers" with almost no technical expertise. The unit did its job so badly that the Legislature required all procurement requests to be sent to the House and Senate Ways and Means Committees for approval prior to OMIS's approval. The result, an immense backlog of procurement requests at the Legislature, and an additional month or two delay before agencies could get the data processing goods and services they needed.

**10. Technical Training.** OMIS lacked a training component, and there was no other state agency with that responsibility. The unavailability of training opportunities was one more factor that contributed to OMIS's inability to compete with the private sector for competent technical personnel. Good people insist on keeping up their skills. The lack of training also made it difficult for employees to improve their skills and job performance.

**11. Assessment of New Technology.** No one at OMIS was responsible for evaluating advances in technology, and in seeing how new developments could be put to use by the Commonwealth. New technology was introduced, to the extent it was, only at the insistence of consultants. This lack made it difficult for Massachusetts to keep current, or competitive with other states.

**12. Software Development Standards.** OMIS's software developers had no system development standards, no project management tools, and no system development methodology. Most development work was done by consultants and they did it the way they wanted to. This led to significant differences among systems, and, on large projects with several different groups of consultants, to systems that lacked even internal consistency. This state of affairs guaranteed later difficulties for OMIS when it had to take responsibility for the maintenance and enhancement of those systems.

**13. Disaster Recovery, Security, Standards.** With the exception of alternate arrangements that OMIS had made for processing Welfare checks, OMIS lacked any ability to support critical systems in the case of disaster, even such minor problems as the loss of building electricity or air conditioning. OMIS also lacked adequate security, and this problem had been highlighted in several EDP audits.

**14. Poor Performance.** Finally, the OMIS Data Center had a bad reputation, and the reputation was deserved. Service levels were erratic, response time was often abysmal, and batch throughput was unreliable.

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# TRANSITION REPORT

## III. Agency Initiatives
1983 - 1991

The Office of Management Information Systems (OMIS) has set itself a large number of initiatives during the past eight years. The major ones are listed below. Each group of initiatives is preceded by the business problem the initiatives were designed to eliminate.

**Business Problem: Inadequate administrative systems, and poor summary data for senior management.**

**Initiatives:**
1. Create an integrated personnel, payroll system for the executive branch.
2. Replace the Comptroller's monthly payroll system.
3. Replace the Comptroller's obsolete accounting and vendor payment system.
4. Develop a personnel reporting system.
5. Develop a Non-Tax Revenue Accounts Receivable system.
6. Develop critical systems for other departments.
7. Implement a wide area network.
8. Provide training and support for users of the new statewide systems.

**Business Problem: High costs, inadequate return on investment in information technology.**

**Initiatives:**
1. Provide oversight for large software development projects.
2. Review agency DP budget requests.
3. Maintain a low cost alternative to vendors's lease purchase interest rates.
4. Bring applications in-house from service bureaus.
5. Create blanket contracts.
6. Replace low-speed, high cost inter-LATA data circuits.
7. Audit telephone bills, and obtain credits for overcharges.
8. Put mainframe procurements out to bid.

**Business Problem: Obsolete or non-existent agency systems, with consequent degraded performance, customer service, productivity.**

**Initiatives:**
1. Require, and assist in the design and implementation of, a new automated system for the Registry of Motor Vehicles.
2. Provide technical consulting to agencies.

**Business Problem: Difficulty attracting and retaining skilled technical personnel. Uncompetitive salary levels. Unprofessional working conditions. Lack of technical training program. Haphazard promotional opportunities.**

**Initiatives:**
1. Submit legislation to remove technical positions from the general salary schedule, and create broad salary ranges within which agency management has discretion regarding compensation levels.
2. Create a training program for technical staff.
3. Provide a professional working environment.
4. Provide opportunities for technical professionals to meet, share experiences.
5. Establish a programmer training program for Commonwealth employees.

**Business Problem: Erratic performance by the OMIS Data Center, inadequate security, insufficient preparation for emergencies. Excessive growth due to lack of fiscal incentives for efficient resource usage.**

**Initiatives:**
1. Create a capacity planning unit.
2. Arrange emergency alternatives for critical systems.

3. Install adequate security measures.
4. Enhance network management.
5. Provide database administration.
6. Implement a chargeback system.
7. Automate computer operations.
8. Install emergency generators.
9. Standardized user interface.

**Business Problem: Getting data processing goods and services on a timely basis, at prices reflecting the Commonwealth's purchasing power.**

**Initiatives:**
1. Hire technical personnel to conduct procurement reviews.
2. Revise procurement regulations and procedures.
3. Establish blanket contracts for commonly procured goods and services.
4. Gain vendor respect, monitor vendor contract performance, conduct orientation sessions for vendors not familiar with the Commonwealth's procedures.
5. Convince Ways and Means Committees to return review/approval authority to OMIS.

**Business Problem: No information technology plan, IT policies or standards.**

**Initiatives:**
1. Create first Massachusetts Information Technology Plan.
2. Establish and publish information technology policies.
3. Work with the Governor's Advisory Committee on Information Technology.

**Business Problem: Poor systems development environment. No procedures for setting system development priorities.**

**Initiatives:**
1. Improve development environment.
2. Establish mechanism for setting priorities.

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## IV. Progress Made in Implementing OMIS Initiatives
1983 - 1991

Business Problem: **Inadequate administrative systems, and poor summary data for senior management.**

Results:

**New Administrative Systems.** During the past eight years OMIS has implemented an impressive set of central, on-line administrative systems. These systems include an integrated personnel/payroll system for executive branch agencies (PMIS) and a new payroll system for the legislature, the constitutional offices, the judiciary, and part of higher education (CAPS). With the help of the Comptroller's Office, OMIS has also installed a new accounting and vendor payments system (MMARS).

OMIS has made major enhancements to PMIS since its initial implementation: attendance calendars, an '03' payroll, direct deposit, automation of the Performance Management System, labor distribution, long term disability, object code revisions, DCAP, sick leave statistics, savings bond deductions, COBRA, pension reform changes, automation of the Employee Performance Review System, an interface to DPA's ELIPSYS system, and attrition/workforce reports.

Major enhancements made to MMARS include: CBARS (affirmative action), an interface to the Budget Bureau's MASSFABS system, fiscal reform changes, object code revisions, fixed assets, lapsing of encumbrances, 1099 processing, and an automated AF-29 form..

**Personnel Data.** OMIS began the development of a personnel reporting system with EOAF's support in late 1989. Known as PARIS (Personnel, Administrative, Reporting, and Information System), the system combines personnel data from PMIS, CAPS, MMARS, and the University of Massachusetts's personnel system (HRMIS). A PARIS prototype is available now that provides on-line access to such high-level information as the number of full-time equivalent (FTE) employees for each branch and level of government. The first production release of PARIS is scheduled for March, 1991.

**Non-Tax Revenue.** At present each department of the Commonwealth operates autonomously in collecting and reporting non-tax revenues. The initial goal of the new Non-Tax Revenue system is to centralize accounting and reporting. In effect, this system will provide the Comptroller a modern, centralized, on-line accounts receivable capability. Analysis is underway and the first production release is scheduled for July, 1991.

**Departmental Systems.** OMIS has developed or enhanced critical systems for several departments, including a capital project management system (CAPICS) for the Department of Capital Planning and Operations, on-going support for the Group Insurance Commission's MAGIC system, a case tracking system for the Department of Industrial Accidents, several billing and licensing systems for the Department of Registration, a billing system for the Office of Telecommunications, and a Universal Health Insurance billing and collection system for the Department of Employment and Training.

**Wide Area Network.** Agencies bought personal computers from OMIS blanket contracts and connected them together into local area networks (LANs) using equipment from OMIS blanket contracts. OMIS then took the third step, and began to hook the LANs together into one large wide area network. Over fifty LANs in three secretariats are now connected together, and the 2,500 users have access to electronic mail, file transfer, the OMIS data center, and a superb global name directory. Future capabilities now being tested on the OMIS LAN include outgoing FAX capability (the ability to send a FAX message to someone directly from one's personal computer or workstation), dial-out access to public databases, and internal access to data resident on CD-ROM drives.

To help support the systems managers responsible for the Commonwealth's local area networks, OMIS also started a users group which has become a popular, viable organization.

**User Training.** To enable agencies to access and create ad hoc reports from their personnel, payroll, and accounting data in PMIS and MMARS, OMIS installed a user-friendly access system called IMAGINE,

and took responsibility for training Commonwealth employees to use it. Classes are conducted weekly in OMIS's terminal-equipped training facilities.

**Business Problem: High costs, inadequate return on investment in information technology.**

**Results:**

**Software Development Project Oversight.** In 1987 an EOHS agency spent over $15 million and had no system to show for the investment. Because of this and similar, smaller problems, the Legislature wrote into OMIS's line item a requirement that funds could not be spent for software development projects costing $500,000 or more without OMIS's approval. OMIS now has a statutory mandate to review agency software development projects, and make sure they stay on track.

**Review of Agency Data Processing Budget Requests.** Although OMIS initiated a pilot project with the Budget Bureau in 1988 which identified significant savings in several EOAF agency budgets (over $1 million), savings which could be taken without harm to the agencies's missions, the pilot was not repeated the following year.

**Lease Interest Rates.** OMIS has kept a contract for Tax Exempt Lease Purchase funds in place since 1986. By combining the Commonwealth's purchasing power, OMIS has been able to obtain interest rates that averaged 6.9% over the past six years, significantly less than the rates which vendors were offering.

**In-Sourcing.** Welfare's Food Stamp Program, when run by EDS (Electronic Data Systems) at its data center, cost Welfare approximately $400,000 a year. OMIS worked with Welfare to bring the system in-house, i.e., to the OMIS data center. Currently Welfare's costs are $150,000, a savings of $250,000 per year.

**Blanket Contracts.** OMIS created over twenty blanket contracts for frequently procured data processing goods and services. These contracts not only simplified the procurement process for agencies, cities, towns, and other governmental entities, they also yielded significant savings. Before blanket contracts were available, each agency had to conduct a separate procurement each time it needed something. The procurements were for small numbers of items, and vendors bid accordingly. Blanket contracts, although they did not guarantee any specific number of purchases, were reusable and lasted for two to five years. Knowing that repeat sales were possible if they provided good service, vendors gave much better prices and better service. (A list of the blanket contracts OMIS established is included in Section V.)

**High-Speed Communications.** OMIS replaced a number of expensive circuits between the 617 and 413 area code areas with one high-bandwidth T-1 trunk between Boston and Springfield. Savings approach $150,000 per year.

**Telephone Audit.** OMIS became responsible for part of the voice communications network in 1990. After a preliminary audit of telephone bills, OMIS presented evidence to New England Telephone that resulted in over $6.4 million in credits for various overbillings. In addition, contract changes yielded over $1.0 million in on-going annual savings. Large additional savings (over $2 million) will be achieved next through equipment audits.

**Competitive Mainframe Procurements.** Because IBM has over 70% of the mainframe computer market, there are other vendors, Amdahl and Hitachi Data Systems, that can profitably manufacture compatible equipment. Thus there is competition, and OMIS has achieved significant savings through competitive procurements. Breaking a long tradition of using only IBM equipment, OMIS bid a mainframe upgrade in 1984, Amdahl won, and OMIS saved over $1.5 million. Later, in 1987, OMIS again put an upgrade out to bid, Hitachi Data Systems won, and OMIS again saved almost $2.0 million. Additional savings have come from bidding disk drives and other peripheral equipment.

These savings are not available to the Commonwealth data centers with Unisys/Sperry or Unisys/Burroughs equipment. Because of Unisys's small market share, no third party manufactures compatible equipment. There is thus no competition, and OMIS has tried to get these Unisys data centers to become IBM-compatible, so they can take advantage of the competition in that market and realize significant savings. To make the conversion, the data centers would have to change both their hardware and their software, so the opportunity to change arises very infrequently. Unfortunately, one of the Unisys data centers did get funds to replace both its hardware and its major software, but chose not to convert. OMIS estimates that the lack of competition in this case, and the higher cost of building software in the Unisys environment, has cost the Commonwealth over $15 million.

**Business Problem: Obsolete or non-existent agency systems, with consequent degraded performance, customer service, productivity.**

**Results:**

**Registry of Motor Vehicles.** In 1984 the Registry asked to patch up its obsolete equipment. OMIS rejected the request, and required that the RMV issue a competitive procurement for new software and new hardware. The winning team of vendors constructed a new data center, installed new, state-of-the art mainframe equipment, and developed an on-line, interactive system, ALARS, to run on it. The latter development proved to require very significant involvement by OMIS management and personnel for several years. The new system has proven its worth. The RMV now has the automated tools it needs to provide good service to its customers, to manage its revenue collections, and to enforce license suspension laws (for the first time). The new system also made possible an award-winning enhancement which the Registry completed this past year to reduce the number of uninsured motorists in the Commonwealth.

**Technical Consulting.** OMIS has completed a long list of successful consulting jobs for other Commonwealth agencies. Most recently, OMIS saw the need for coordinating the Commonwealth's efforts to develop geographic information systems (GISs), and it took the lead in forming a Geographic Information Committee with members from state agencies, cities and towns, authorities, educational institutions (both public and private), and GIS vendors.

OMIS helped the District Attorneys Association implement the same case tracking system (PROMIS) in all Massachusetts counties. Among many other engagements, it has helped the Rate Setting Commission implement a departmental system, and the Departments of Public Health and Mental Health install critical hospital billing systems.

OMIS has also helped the Department of Public Works procure CAD equipment both for itself and for contractors on the Central Artery Project, and the Executive Office of Environmental Affairs obtain a secretariat IT plan and compatible departmental systems in the secretariat's constituent agencies.

More recently, OMIS has worked with the Department of Public Welfare by providing information about efforts being made in other states to control Medicaid costs, and the Executive Office of Public Safety to upgrade the communications link between the Registry and the EOPS data center, to provide additional Registry informtion to local law enforcement agencies, and to determine the feasibility of a single incident reporting system for the four state level police forces (State Police, Registry Police, MDC Police and Capital Police).

**Business Problem: Difficulty attracting and retaining skilled technical personnel. Uncompetitive salary levels. Unprofessional working conditions. Lack of technical training program. Haphazard promotional opportunities.**

**Results:**

**Technical Pay Law.** With the help of the Governor's Advisory Committee on Information Technology, OMIS successfully introduced legislation in 1983 establishing a separate, and significantly different, salary schedule for technical positions. This law has made it possible for all Commonwealth agencies to offer competitive salaries, compete with the private sector, and reduce their dependence on consultants.

**Technical Education.** OMIS added a bureau for technical education in 1986. Since that time, BTE has maintained a full schedule of technical classes for all Commonwealth employees, published a course catalog annually, issued monthly updates, and prepared individualized training plans for OMIS's key technical employees.

**Professional Environment.** In addition to the Technical Pay Law, which provided salary equity, OMIS has made significant efforts to provide its employees a professional working environment, adequate equipment and professional software tools, regular performance reviews and promotional career ladders.

**Informal In-Service Training for Agency MIS Personnel.** OMIS established a speakers series, featuring well-known speakers in the information technology field.

Also, with help from the Kennedy School, the MITRE Corporation, Boston University and others, OMIS has conducted a series of seminars for MIS Directors and their senior staff from 1986 on. The conferences were well received, well attended, and much appreciated. Many MIS Directors are somewhat isolated from their technical peers, and welcome the opportunity to meet each other, discuss problems and share solutions to common problems.

Finally, the OMIS data communications unit has instituted a Data Communications Round Table for agency personnel responsible for data or voice communications. The group meets monthly. Speakers are invited from various public and private firms. Topics have included ISDN, recent tariff changes, and automated network management.

**Programmer Training.** In 1988, for the first time in the history of the Commonwealth, OMIS conducted a Programmer Training Program (PTP) designed to turn Commonwealth employees with an apptitude for programming into entry level programmers. A class of twelve was selected from over 800 applicants through interviews, and aptitude test scores. On completion of the thirteen-week, full-time program, the twelve graduates received placements in agencies, and began programming. They have succeeded beyond expectation.

**Business Problem: Poor performance by the OMIS Data Center, inadequate security, and insufficient preparation for emergencies. Also, excessive growth due to lack of fiscal incentives for efficient resource usage.**

**Results:**

**Capacity Planning.** In April, 1986, the Data Center "hit the wall", i.e., response time for on-line systems went off the chart. The cause: lack of capacity. This crisis highlighted OMIS's lack of a capacity planning unit and one was created immediately. The unit publishes regular reviews of OMIS's current and future needs. Since the unit's inception, the data center has never again "hit the wall".

**Contingency Planning/Disaster Recovery.** Although OMIS is responsible for a payroll for over 65,000 individuals, it had taken no steps, as late as 1986, to obtain an alternate processing site, in the event of equipment failure at the Data Center. Negotiations were initiated with the Registry of Motor Vehicles, and now the Registry Data Center has been configured so that it can serve as an alternate processing site for OMIS's critical systems in the event of trouble.

**Security.** OMIS began a series of security steps in 1985 by installing a port protection device to protect its dial-up ports. In 1987 OMIS established an information security unit. RACF was installed next, and 14,000 access identification codes and passwords were set up for the data center's users.

**Network Management.** The OMIS network has grown from 100 to 235 data circuits since 1984, and supports over 5,000 terminal devices. Management of this network has become a significant problem. OMIS implemented automated network operation in 1988. In addition, it has integrated its network with OMIS's wide area network, to provide mainframe access to personal computers, and recently it added a DECNET/SNA gateway to provide efficient mainframe access for agencies with DEC departmental systems.

**Database Administration.** In 1987 OMIS formed a database unit. At present roughly one-third of the data center's on-line disk storage is under control of the center's database management system. Members of the unit help agency programmers make efficient use of the center's fourth generation language facilities, especially in the area of file access.

**Chargeback System.** In 1986 OMIS received approval to establish rates for its data center, bill agencies for their use of its resources, put a portion of the receipts in a retained revenue account, and spend the retained revenue without reappropriation. For the first time in OMIS's history users had an economic incentive to use the data center's resources efficiently.

The chargeback system has proven to be very successful. Agencies have made significant efforts to reduce printing, free up allocated but unused on-line storage, defer low priority jobs from prime to non-prime shift, and take other steps to reduce costs, which are now their costs. Further, OMIS has been able, with the retained revenue, to respond on a much more timely basis to user's needs for additional resources. The chargeback system has proven to be a complete success.

**Automated Operations.** The Data Center has installed the following as steps towards a fully automatic operations center: Valu-Lib tape management system (1983), Job Scheduling (1987), and a roll print feeder (1988). Under evaluation is a helical scan device that would eliminate about 65% of the center's tape mounting activity.

**Emergency Generators.** With the help of the Department of Capital Planning and Operations, OMIS has installed diesel generators with 1750 KW of output on the roof of the McCormack Office Building to provide emergency electric power in the case of brownouts or blackouts in the commercial power grid.

**Standardized Procedures.** The data center has standardized all of the forms agencies need to request ser-

vices from the data center, or use its resources. It has also standardized all communications from the data center into three series of publications: customer bulletins, technical bulletins and product bulletins. To date over 90 bulletins have been issued to the data center's user community. The data center has also standardized data set naming in preparation for the implementation of an automated storage management system, a more efficient way of storing data at the data center. Most of the forms and bulletins are available on-line.

**Conclusion.** During the past eight years OMIS has made very significant improvements in data center operations. OMIS is now a professionally run, well-respected data center. It's costs are well below market. It has a well-trained, motivated staff, and it has reduced costs each year while providing more services.

**Business Problem: Agencies were faced with a difficult, time-consuming process to procure data processing goods and services. Further, they paid unnecessarily high prices, and had little leverage to ensure good service.**

**Results:**

**Technically competent procurement staff.** OMIS was able to recruit technical staff for its procurement unit for two reasons: One was the technical pay law, which enabled OMIS to compete with the private sector in salaries. The other was OMIS's improving reputation, and the fact that the procurement unit was part of a larger, technically competent organization.

**Revised, Streamlined Procedures.** OMIS completely rewrote EOAF's procurement regulations, improved them significantly, and published a guideline that summarized the major types of procurements and the amount of time an agency would need to complete each type of procurement.

**Blanket Contracts.** Prior to 1983, if a department wanted a word processor, it issued an RFP, evaluated the results, negotiated a contract with the winning vendor, and then took delivery. If it later needed additional units OMIS required it to repeat the entire process. Under that policy, a department would end up with incompatible models from various vendors, and significant problems: files could not be transferred among the different vendors's equipment, employees had to be retrained if they moved to a unit with a different vendor's equipment, and equipment maintenance could not be unified. Further, each procurement took an inordinate amount of time, and the Commonwealth was unable to use its full purchasing power, as each procurement was for a small number of units.

In 1983, OMIS took the first step to end this state of affairs. It created what is known as a "blanket contract", a two to five year term pricing agreement that state agencies, cities, towns and other governmental units could use whenever necessary. Blanket contracts were established competitively, and eliminated the need for repetitive departmental RFPs. They therefore saved agencies significant time and effort. Further, since agencies could order from the same vendor as they added additional equipment, they were allowed compatible growth. Finally, by in effect combining numerous small procurements, OMIS got significant price discounts for agencies.

Within several years, OMIS had as many as 20 blanket contracts in place, ranging from cabling services through personal computers to terminals and disk drives for mainframes.

**Vendor Relations.** OMIS earned respect from the vendor community by its even-handed and fair administration of the DP procurement process, and by its willingness to listen to vendors's issues and problems with the procurement process. OMIS also conducted semi-annual "How to Do Business with the Commonwealth" seminars for vendors that were not familiar with the Commonwealth's procedures.

**Return of AF-29 Approval Authority.** By 1984 the Ways and Means Committees agreed that OMIS had significantly improved its procurement unit, and removed the requirement that data processing requests (known as AF-29 forms) be forwarded to them for approval. OMIS viewed this change as a vote of confidence for its efforts to recruit technically knowledgeable people for its procurement unit, and its administration of EOAF's data processing procurement regulations and procedures.

**Business Problem: No information technology plan, no IT policies, and no standards. Weak relationship with the Governor's Advisory Committee on Information Technology (GACIT).**

**Results:**

**GACIT.** At OMIS's request, GACIT increased its membership with specialists in the areas of office automation and telecommunications, a chief information

officer from a large corporation, and the president of a database oriented software development firm. Also at OMIS's request, GACIT hired a consultant to review OMIS's competitive procurement procedures and regulations, and recommended to EOAF and the Governor that OMIS's regulations not be changed in the ways suggested by the Inspector General's Office. GACIT also advised EOAF that DP procurement authority should not be removed from OMIS. Further, GACIT helped the recent Crozier Commission, and has been very helpful to OMIS in the preparation of the Information Technology Plan.

**State Information Technology Plan.** With GACIT's help, OTP is in the final stages of producing Phase I of the first Information Technology Plan for the executive branch of the Commonwealth.

**Information Technology Policies.** OMIS has promulgated over a dozen information technology policies, ranging from a requirement that agencies install generic wiring when cabling their buildings to a rule that keeps consultants who perform a needs assessment study from doing any of the follow-up work that arises from that needs assessment. A list of the OMIS's major policies that OMIS has promulgated is included in Section V.

**Business Problem: Poor systems development environment. No procedures for setting system development priorities.**

**Results:**

**Environment.** OMIS's Bureau of Systems Services (BSS) has implemented Productivity Plus, a systems development methodology, and WINGS, an automated project management system. BSS has also published detailed software development standards for its employees, and taken an important first step in the direction of computer assisted software engineering by installing Index Technology's Excelerator package.

**Priorities.** BSS has established three steering committees, one for its human resources unit (PMIS, CAPS), one for its financial services unit (MMARS), and one for its departmental systems unit. These committees have proven to be indispensable in the allocation of resources in the currently fiscally difficult times.

Office of Management Information Systems
Executive Office of Administration and Finance

# TRANSITION REPORT

## V. Statistical History
1983 - 1991

**Revenue**

Sources of Funds (Chart, Table)
Budgets, by Bureau (Table)

**Expenditures**

Personnel Expenditures (Chart)
Expenditures on Consultants (Chart)
Equipment Expenditures (Chart)
Total Expenditures, by Category (Chart, Table)
Total Expenditures, by Bureau (Table)
Equipment Amortization (Table)

**Personnel**

Personnel Decreases (Chart)
Changes, by Category (Chart)

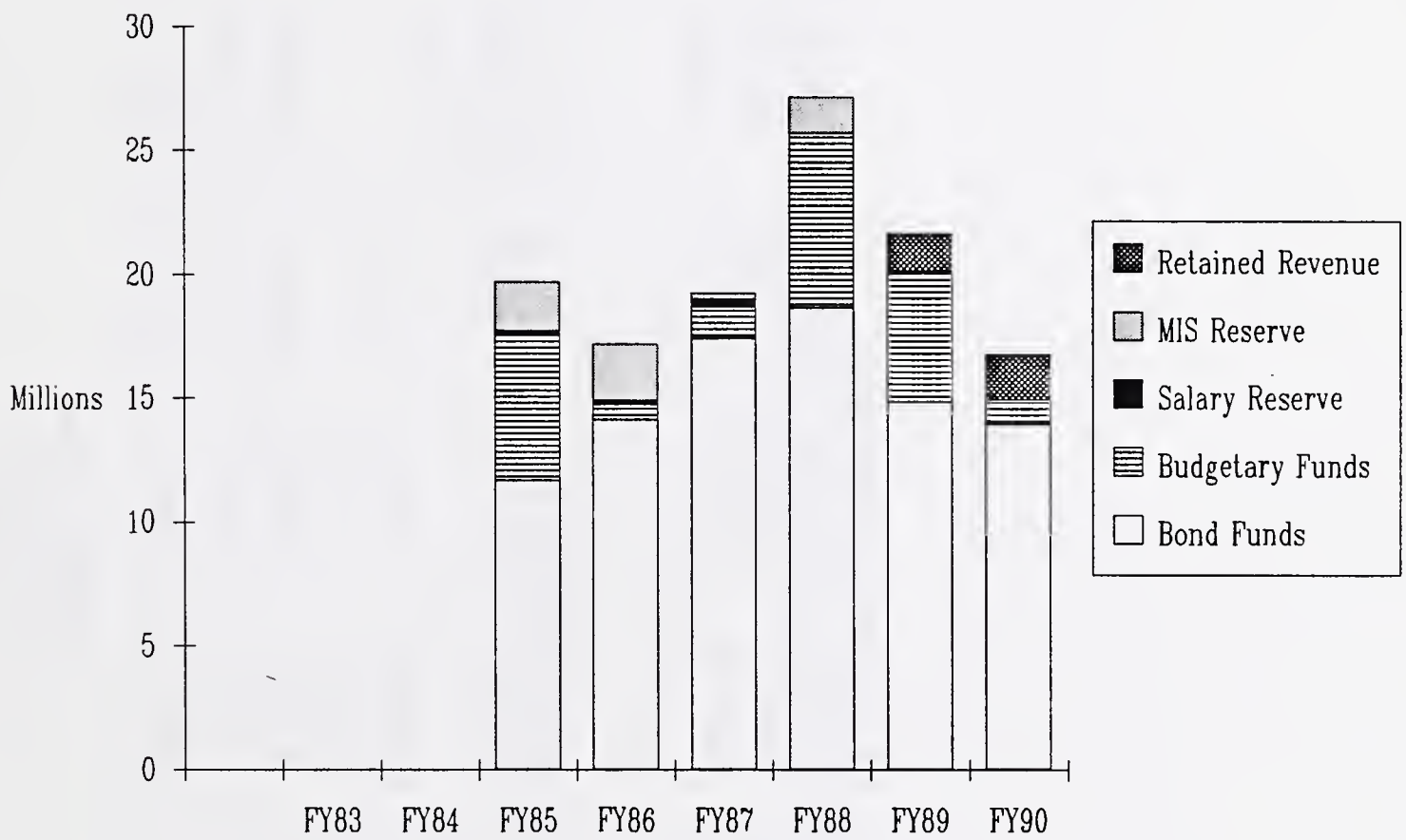
**Performance Benchmarks**

Technical Pay Law Implementation

Tax Exempt Lease Purchase Implementation

OMIS Data Center
- Configuration
- Network Growth
- Growth in On-Line Storage
- Growth in Comnputing Power

Bureau of Systems Policy and Planning
- Blanket Contracts
- Information Policy Memoranda


OMIS
Sources of Funds
FY1983 - FY1990
Millions
30
25
20
15
10
5
0
FY83
FY84
FY85
FY86
FY87
FY88
FY89
FY90
Retained Revenue
MIS Reserve
Salary Reserve
Budgetary Funds
Bond Funds

# OMIS

Sources of Funds

*FY1983 - FY1991*

| Funds | FY83 | FY84 | FY85 | FY86 | FY87 | FY88 | FY89 | FY90 | FY91(1stQ) |
|---|---|---|---|---|---|---|---|---|---|
| BF | | | 11,661,110 | 14,108,134 | 17,400,000 | 18,649,129 | 14,816,058 | 13,937,685 | |
| BDF | | | 5,951,853 | 636,353 | 1,263,902 | 7,000,000 | 5,261,463 | 973,735 | |
| SR | | | 87,668 | 140,170 | 321,625 | 0 | 0 | 0 | |
| MR | | | 2,000,000 | 2,300,000 | 246,500 | 1,469,712 | 0 | 0 | |
| RR | | | 0 | 0 | | | 1,542,108 | 1,845,011 | |
| TOTAL | | | 19,700,631 | 17,184,657 | 19,232,027 | 27,118,841 | 21,619,629 | 16,756,431 | |

BF = Budgetary Funds, BDF = Bond Funds, SR = Salary Reserve, MR = MIS Reserve, RR = Retained Revenue

| Reconciliation with Expenditures | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| AMT | (867,515) | (747,056) | (4,765,973) | 893,752 | 735,163 | (4,141,356) | (697,273) | 2,712,990 | |
| RV | | | (549,925) | (424,548) | (158,902) | (1,178,898) | (486,601) | (328,437) | |
| NET | 14,026,749 | 13,575,500 | 14,384,733 | 17,653,861 | 19,808,288 | 21,798,587 | 20,435,755 | 19,140,984 | |

AMT = Amortization of Equipment Purchase Costs over 5 Years, RV = Reversions

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# OMIS

Budgets by Bureau

*FY1983 – FY1991*

| Bureau | FY83 | FY84 | FY85 | FY86 | FY87 | FY88 | FY89 | FY90 | FY91(Est) |
|---|---|---|---|---|---|---|---|---|---|
| BSS | | | $4,549,871 | $5,366,892 | $4,446,423 | $5,662,692 | $4,853,803 | $4,743,799 | $6,163,923 |
| BCS | | | 13,068,229 | 9,329,050 | 11,115,676 | 17,591,922 | 12,270,591 | 8,581,188 | 8,866,843 |
| OTP | | | 1,040,802 | 1,062,005 | 1,338,607 | 1,704,338 | 1,835,889 | 688,686 | 583,882 |
| ADM | | | 752,393 | 1,082,586 | 566,885 | 642,295 | 658,293 | 640,923 | 613,869 |
| BTE | | | 289,336 | 344,124 | 389,474 | 557,152 | 455,496 | 257,863 | 232,528 |
| OD | | | 0 | 0 | 407,200 | 543,506 | 465,468 | 295,610 | 316,381 |
| SP | | | 0 | 0 | 762,418 | 408,081 | 329,501 | 149,302 | 0 |
| BDR | | | 0 | 0 | | | 643,480 | 355,305 | 0 |
| UN | | | 0 | 0 | 205,344 | 8,855 | 107,108 | 63,140 | 0 |
| OTC | | | | | | | | 980,615 | 0 |
| TOTAL | | | 19,700,631 | 17,184,657 | 19,232,027 | 27,118,841 | 21,619,629 | 16,756,431 | 16,777,426 |

SP = Special Projects, BDR = Database Resources (merged with BCS), UN = Unassigned, OTC = Telecommunications

| Reconciliation with Expenditures | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| AMT | (867,515) | (747,056) | (4,765,973) | 893,752 | 735,163 | (4,141,356) | (697,273) | 2,712,990 | 2,985,560 |
| RV | | | (549,925) | (424,548) | (158,902) | (1,178,898) | (486,601) | (328,437) | |
| NET | 14,026,749 | 13,575,500 | 14,384,733 | 17,653,861 | 19,808,288 | 21,798,587 | 20,435,755 | 19,140,984 | 19,762,986 |

AMT = Amortization of Equipment Purchase Costs over 5 Years, RV = Reversions

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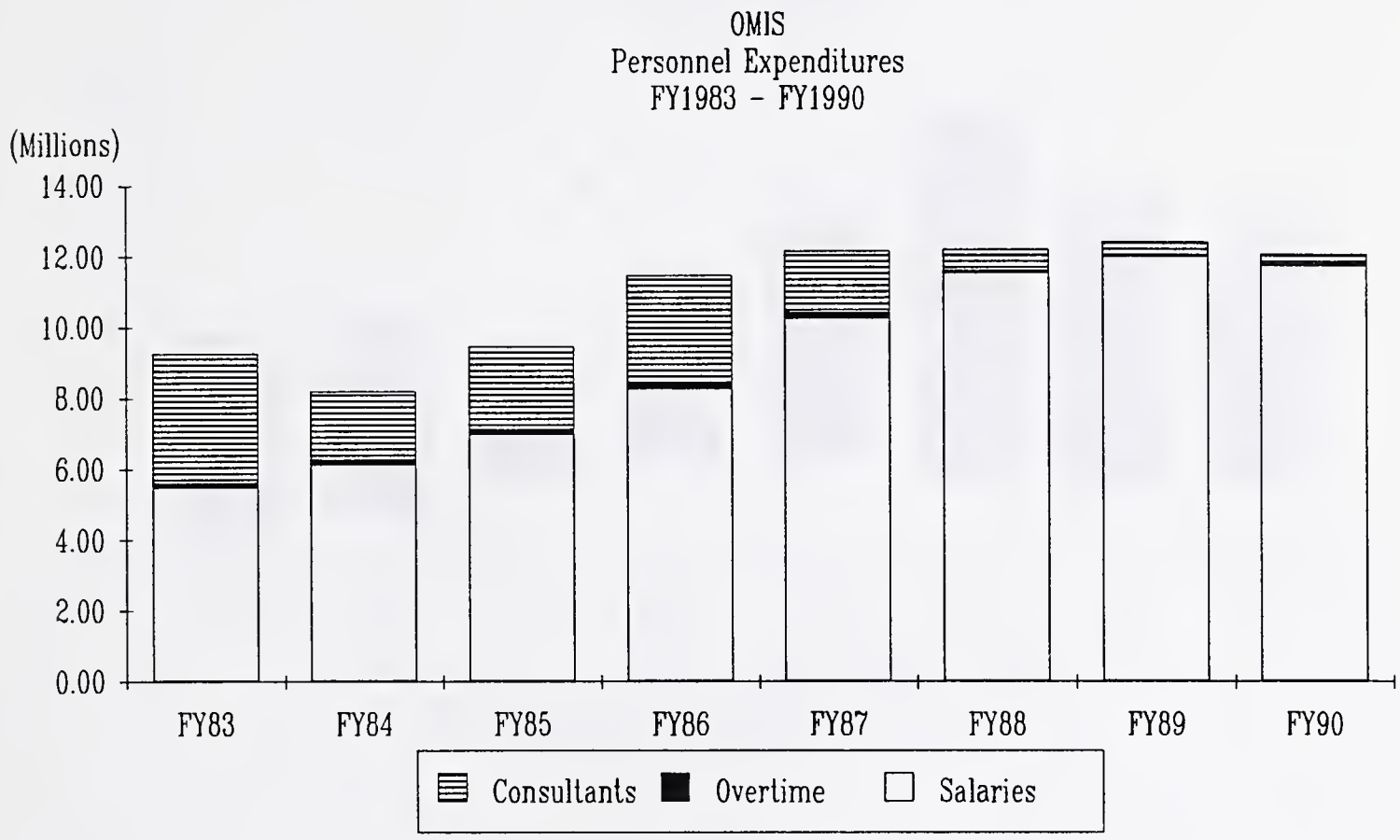
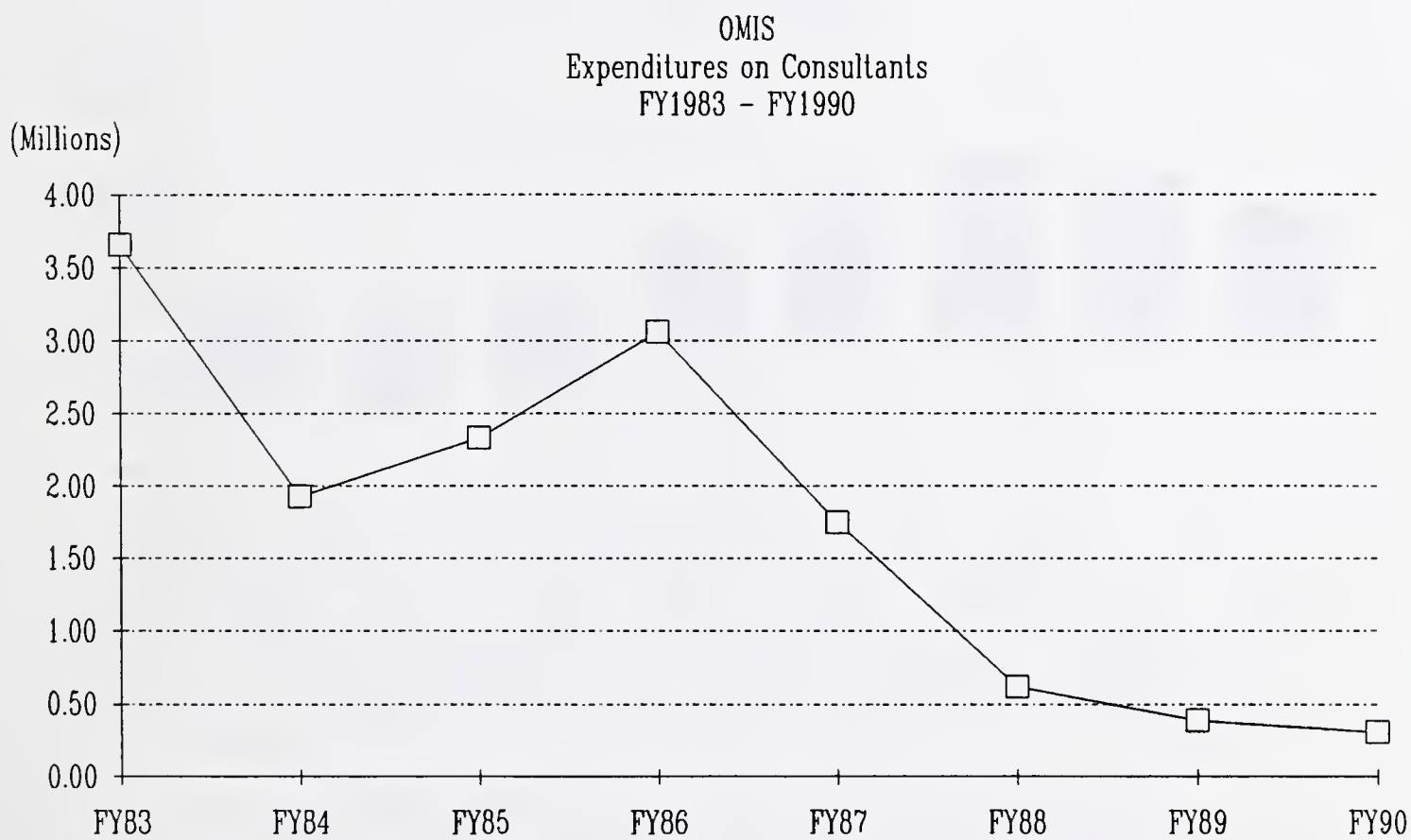
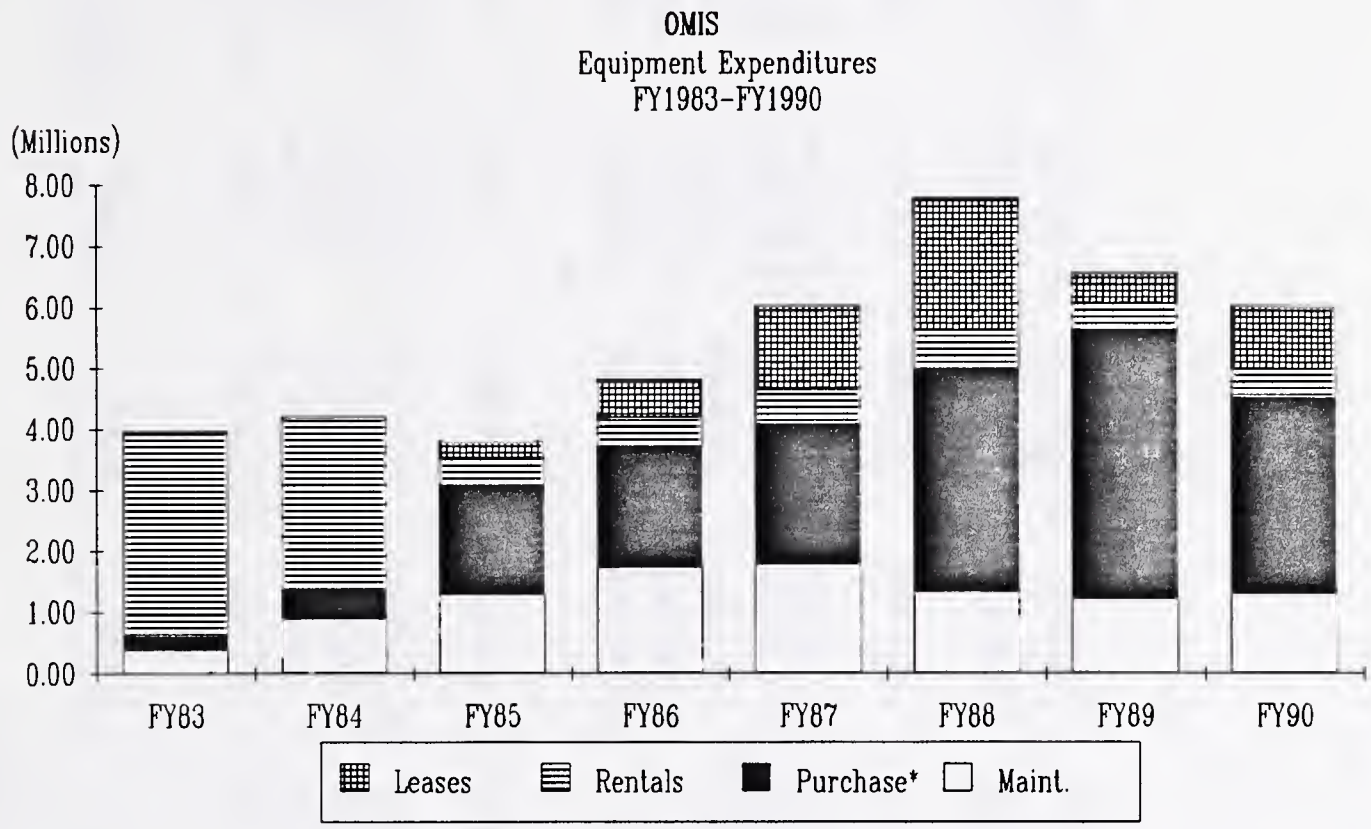
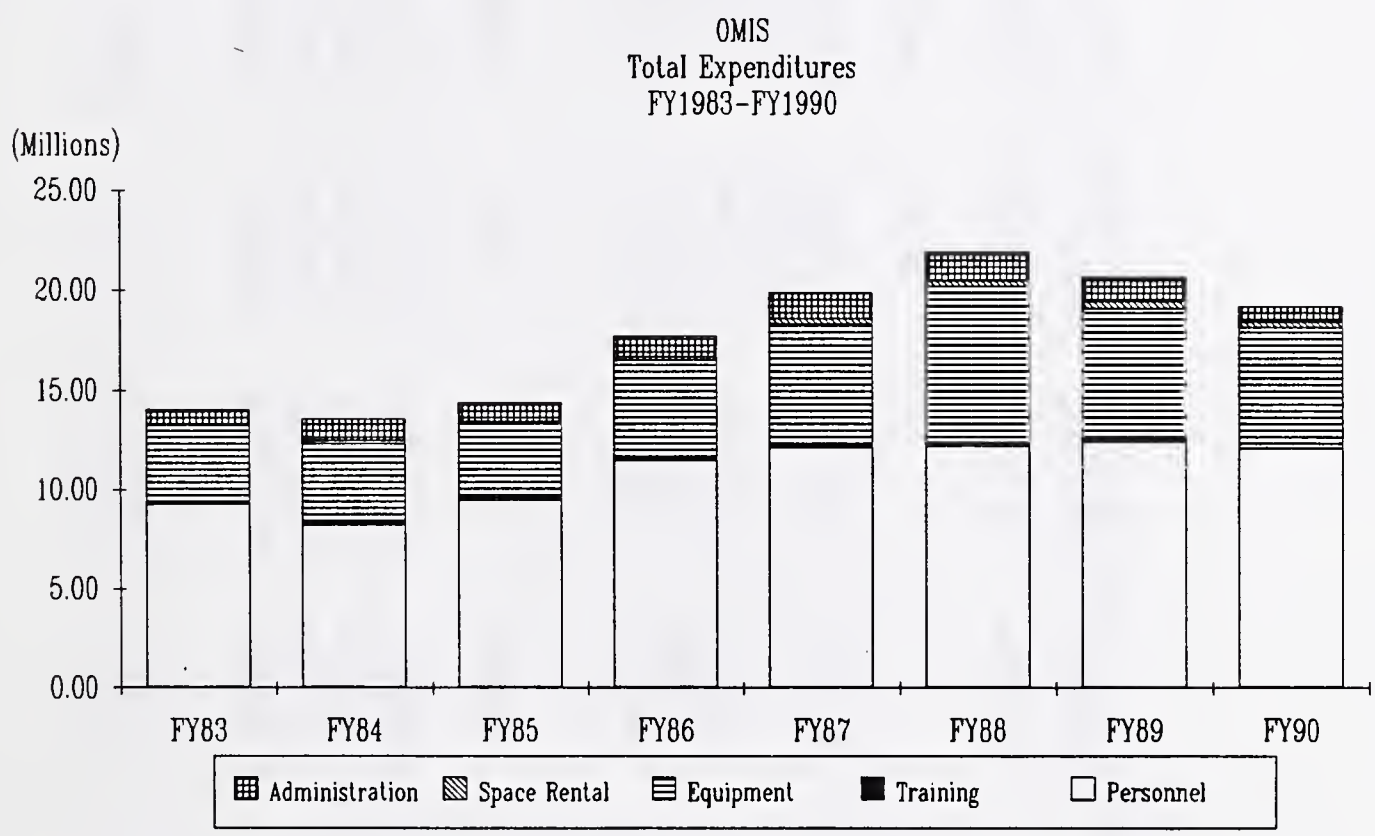

OMIS
Personnel Expenditures
FY1983 - FY1990
(Millions)
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
FY83
FY84
FY85
FY86
FY87
FY88
FY89
FY90
Consultants
Overtime
Salaries


OMIS
Expenditures on Consultants
FY1983 - FY1990
(Millions)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
FY83
FY84
FY85
FY86
FY87
FY88
FY89
FY90




*Equipment Purchase Costs are Amortized over 5 Years.



# OMIS

Expenditures by Category

*FY1983 – FY1991*

| | FY83 | FY84 | FY85 | FY86 | FY87 | FY88 | FY89 | FY90 | FY91(1stQ) |
|---|---|---|---|---|---|---|---|---|---|
| Personnel | | | | | | | | | |
| Salaries | 5,471,992 | 6,114,371 | 6,959,271 | 8,249,283 | 10,231,258 | 11,508,285 | 11,963,845 | 11,716,794 | 2,272,933 |
| Overtime | 109,893 | 136,500 | 141,900 | 136,133 | 135,106 | 50,512 | 26,267 | 13,743 | 2,409 |
| Consultants | 3,658,150 | 1,925,915 | 2,333,622 | 3,061,047 | 1,747,010 | 616,883 | 387,611 | 306,708 | 55,612 |
| Total | 9,240,035 | 8,176,786 | 9,434,793 | 11,446,463 | 12,113,374 | 12,175,680 | 12,377,723 | 12,037,245 | 2,330,954 |
| Training | 50,227 | 92,747 | 115,891 | 186,089 | 130,459 | 177,333 | 95,420 | 18,764 | 2,973 |
| Equipment | | | | | | | | | |
| Maint. | 382,273 | 888,749 | 1,275,809 | 1,723,487 | 1,769,549 | 1,325,672 | 1,206,626 | 1,294,254 | 193,289 |
| Purchase* | 216,879 | 457,862 | 1,763,821 | 1,981,339 | 2,292,883 | 3,630,344 | 4,411,018 | 3,203,077 | 746,390 |
| Rentals | 3,353,487 | 2,851,845 | 477,883 | 477,828 | 573,884 | 641,598 | 426,925 | 477,854 | 20,033 |
| Leases | 0 | 0 | 275,365 | 623,212 | 1,374,256 | 2,176,296 | 493,213 | 1,031,848 | 251,470 |
| Total | 3,952,639 | 4,198,456 | 3,792,878 | 4,805,866 | 6,010,572 | 7,773,910 | 6,537,782 | 6,007,033 | 1,211,182 |
| Space | 0 | 0 | 38,728 | 169,092 | 264,044 | 275,349 | 366,860 | 282,418 | 28,799 |
| Admin | 783,848 | 1,107,511 | 1,002,443 | 1,046,351 | 1,289,839 | 1,396,315 | 1,161,978 | 795,524 | 6,519 |
| Totals | 14,026,749 | 13,575,500 | 14,384,733 | 17,653,861 | 19,808,288 | 21,798,587 | 20,539,763 | 19,140,984 | 3,580,427 |

*Figures reflect 5 year amortization of equipment purchase costs.

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# OMIS

Expenditures by Bureau

*FY1983 – FY1991*

| Bureau | FY83 | FY84 | FY85 | FY86 | FY87 | FY88 | FY89 | FY90 | FY91(1stQ) |
|---|---|---|---|---|---|---|---|---|---|
| BSS | 4,524,357 | 3,355,135 | 4,164,000 | 5,404,439 | 4,502,638 | 5,180,469 | 4,677,984 | 4,696,307 | 959,490 |
| BCS | 7,542,159 | 8,316,193 | 8,403,505 | 10,038,329 | 11,817,140 | 13,090,635 | 11,846,778 | 10,794,210 | 2,218,877 |
| OTP | 764,005 | 819,395 | 888,484 | 1,044,410 | 1,262,769 | 1,506,165 | 1,526,203 | 812,429 | 150,327 |
| ADM | 392,491 | 607,076 | 695,896 | 902,721 | 513,205 | 620,373 | 651,496 | 651,522 | 112,430 |
| BTE | 131,084 | 141,439 | 216,991 | 248,104 | 350,212 | 440,832 | 400,210 | 292,994 | 64,864 |
| OD | 253,905 | 335,765 | 15,759 | 15,759 | 395,580 | 502,001 | 467,257 | 343,909 | 69,639 |
| SP | 0 | 0 | 0 | 0 | 758,937 | 349,479 | 316,143 | 146,966 | 0 |
| BDR | 0 | 0 | 0 | 0 | 0 | 0 | 544,388 | 360,978 | 4,800 |
| UN | 418,748 | 98 | 98 | 98 | 207,807 | 108,635 | 109,305 | 68,748 | 0 |
| OTC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 972,921 | 0 |
| TOTAL | 14,026,749 | 13,575,100 | 14,384,733 | 17,653,861 | 19,808,288 | 21,798,589 | 20,539,763 | 19,140,984 | 3,580,427 |

All figures reflect 5 year amortization of equipment purchase costs.

8391EBB(A1..L22)

# OMIS

## Amortization of Equipment Purchase Costs

*Totals by Fiscal Year*

| | FY83 | FY84 | FY85 | FY86 | FY87 | FY88 | FY89 | FY90 | FY91(Est.) |
|---|---|---|---|---|---|---|---|---|---|
| Cost | 1,084,394 | 1,204,918 | 6,529,794 | 1,087,587 | 1,557,720 | 7,771,700 | 5,108,291 | 490,087 | 0 |
| Amortization Schedule | 216,879 | 216,879 | 216,879 | 216,879 | 216,879 | | | | |
| | | 240,984 | 240,984 | 240,984 | 240,984 | 240,984 | | | |
| | | | 1,305,959 | 1,305,959 | 1,305,959 | 1,305,959 | 1,305,959 | | |
| | | | | 217,517 | 217,517 | 217,517 | 217,517 | 217,517 | |
| | | | | | 311,544 | 311,544 | 311,544 | 311,544 | 311,544 |
| | | | | | | 1,554,340 | 1,554,340 | 1,554,340 | 1,554,340 |
| | | | | | | | 1,021,658 | 1,021,658 | 1,021,658 |
| | | | | | | | | 98,017 | 98,017 |
| Totals | 216,879 | 457,862 | 1,763,821 | 1,981,339 | 2,292,883 | 3,630,344 | 4,411,018 | 3,203,077 | 2,985,560 |

*Totals By Bureau By Fiscal Year*

| | FY83 | FY84 | FY85 | FY86 | FY87 | FY88 | FY89 | FY90 | FY91(Est.) |
|---|---|---|---|---|---|---|---|---|---|
| BSS | 935 | 45,130 | 109,871 | 128,855 | 137,912 | 229,578 | 250,477 | 186,152 | 167,168 |
| BCS | 212,189 | 382,905 | 1,602,556 | 1,790,380 | 2,027,009 | 3,216,251 | 3,891,249 | 2,768,375 | 2,580,551 |
| OTP | 3,420 | 9,619 | 26,882 | 37,591 | 64,898 | 93,410 | 156,796 | 139,533 | 128,823 |
| ADM | 42 | 4,352 | 6,657 | 6,657 | 20,452 | 26,889 | 27,527 | 25,378 | 25,378 |
| BTE | 0 | 0 | 1,998 | 1,998 | 11,720 | 29,837 | 44,230 | 42,232 | 42,232 |
| OD | 195 | 15,759 | 15,759 | 15,759 | 30,794 | 34,379 | 21,542 | 22,209 | 22,209 |
| BDR | 0 | 0 | 0 | 0 | 0 | 0 | 19,198 | 19,198 | 19,198 |
| UN | 98 | 98 | 98 | 98 | 98 | 0 | 0 | 0 | 0 |
| Totals | 216,879 | 457,862 | 1,763,821 | 1,981,339 | 2,292,883 | 3,630,344 | 4,411,018 | 3,203,077 | 2,985,560 |

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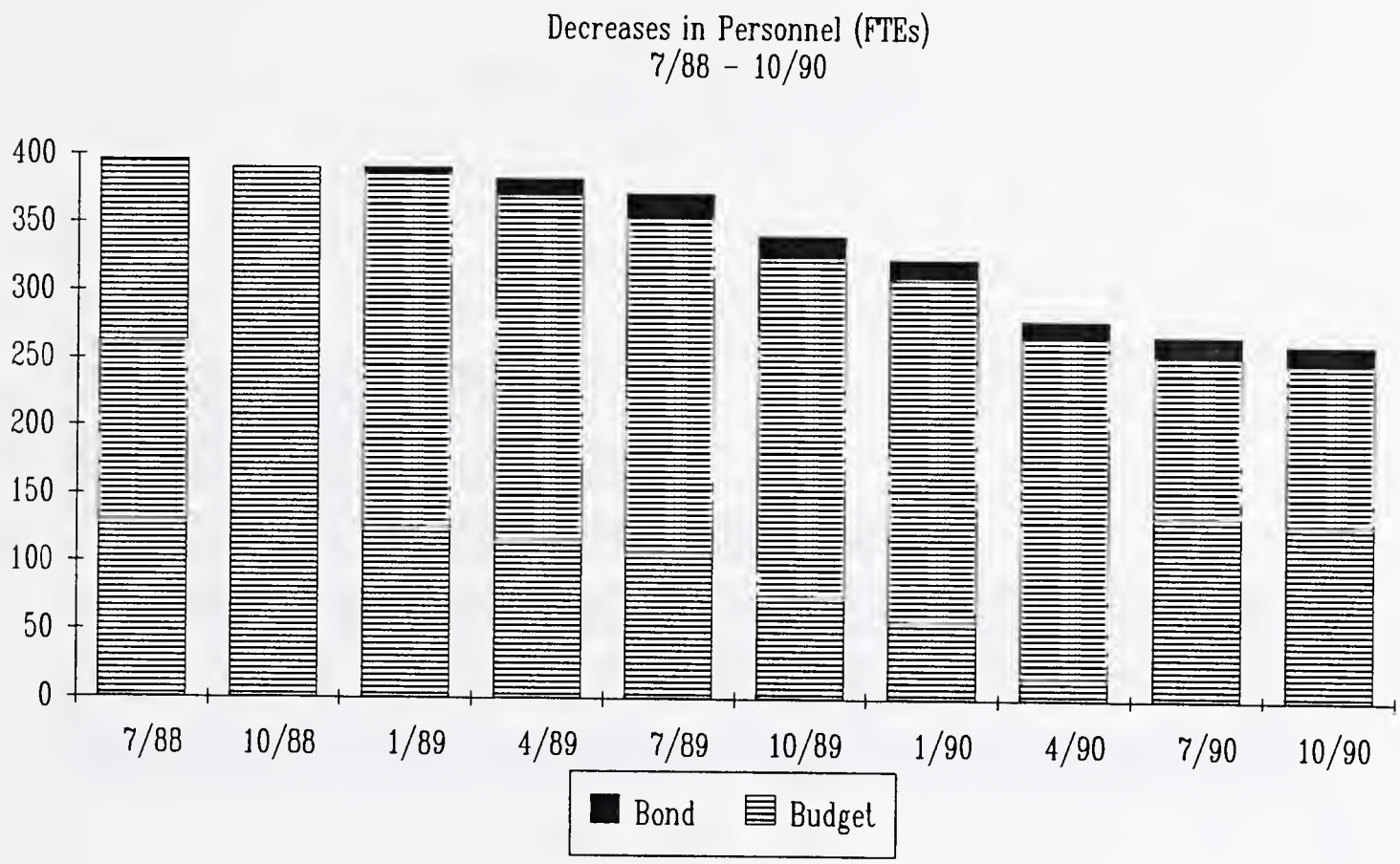
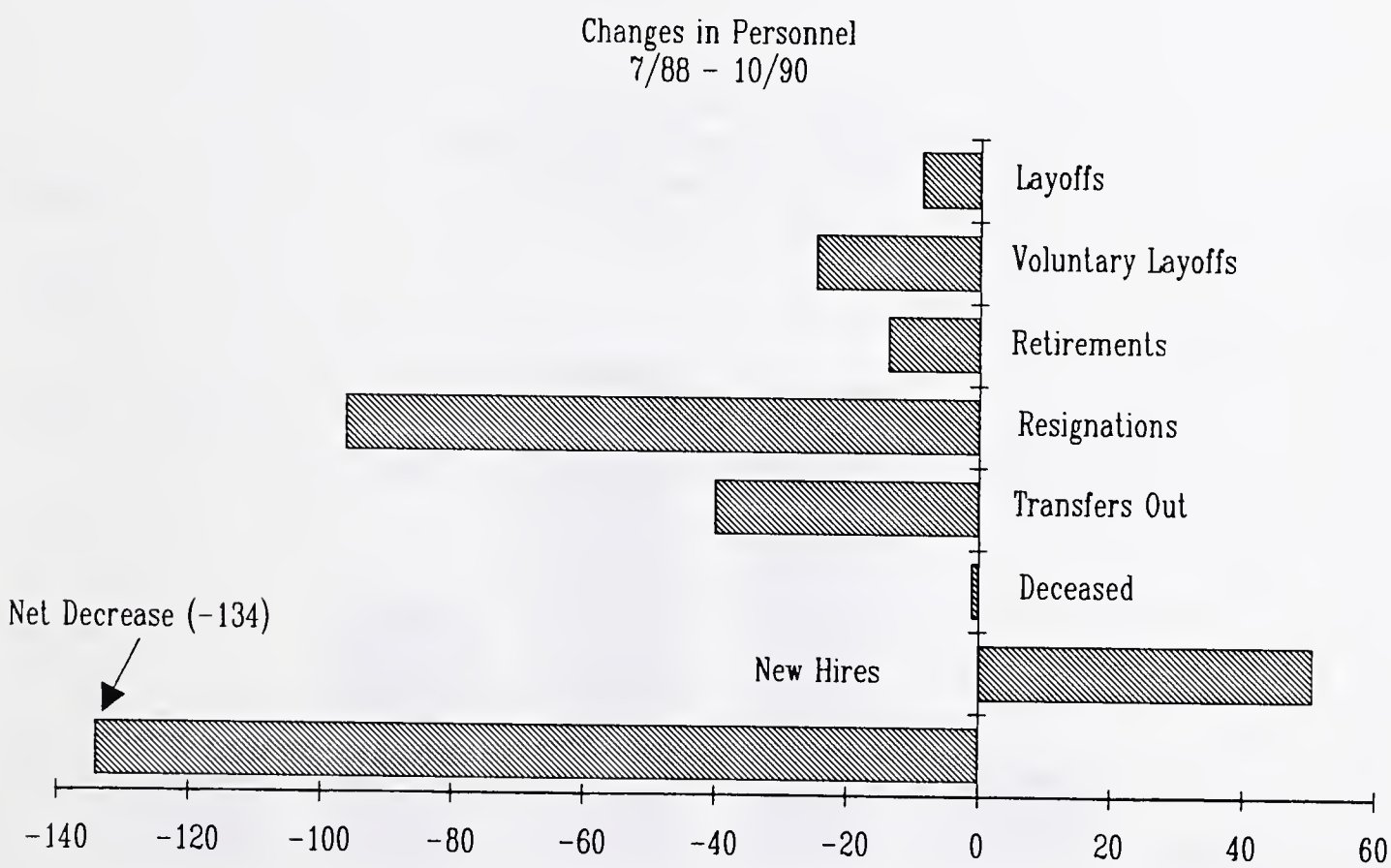
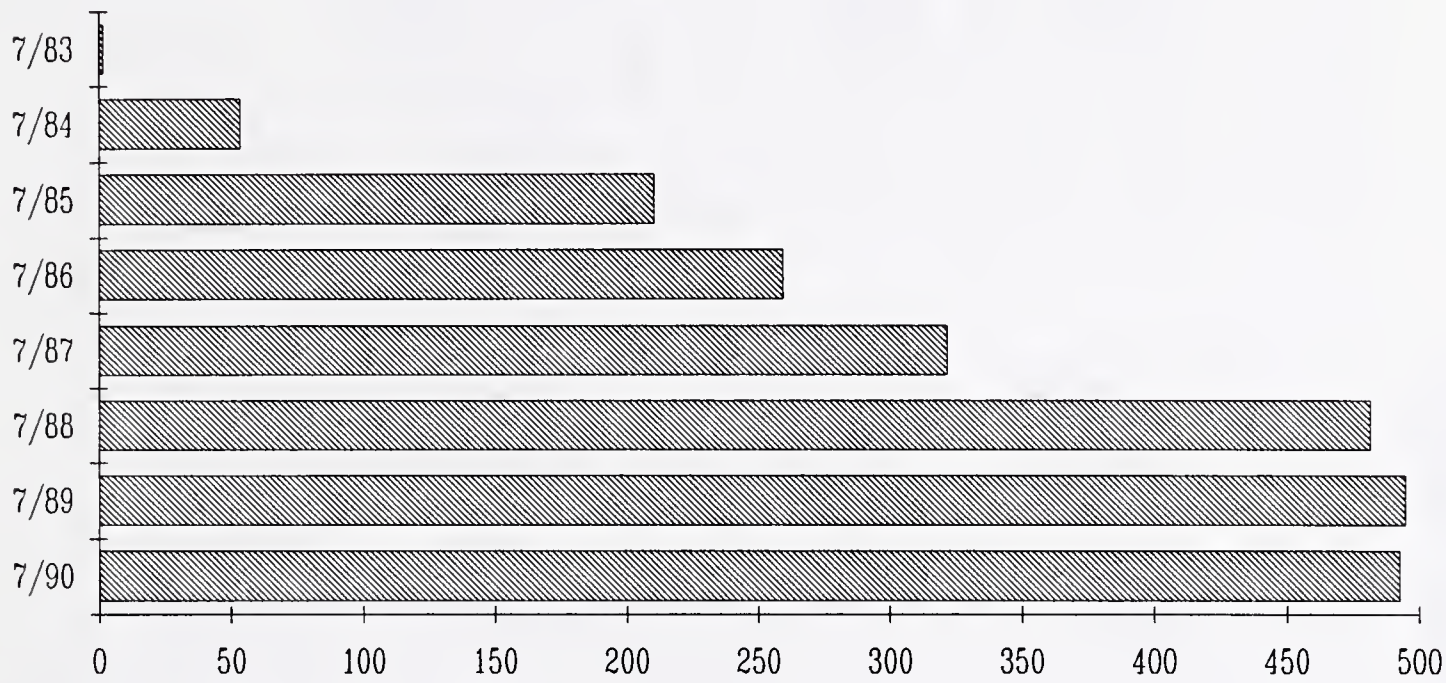
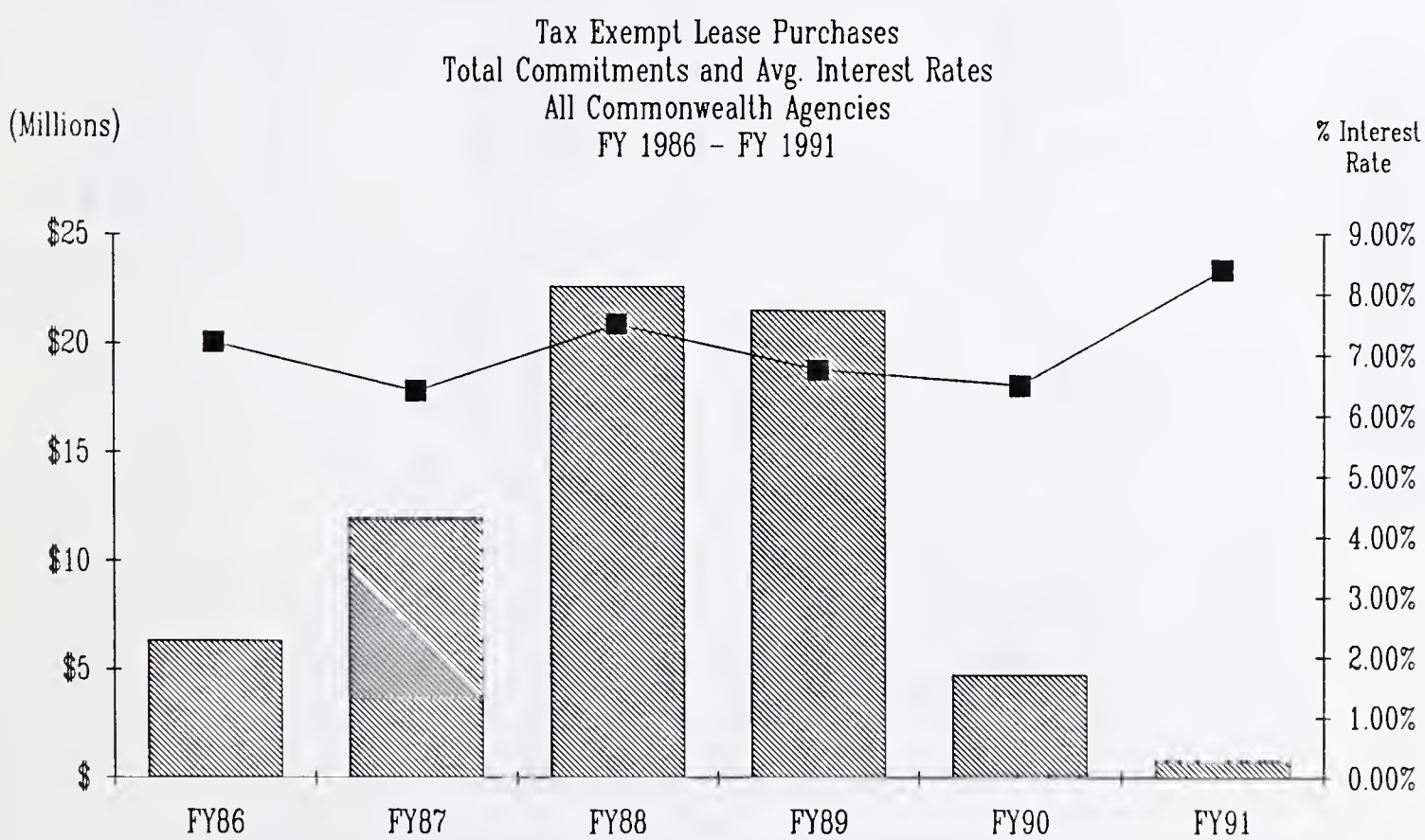
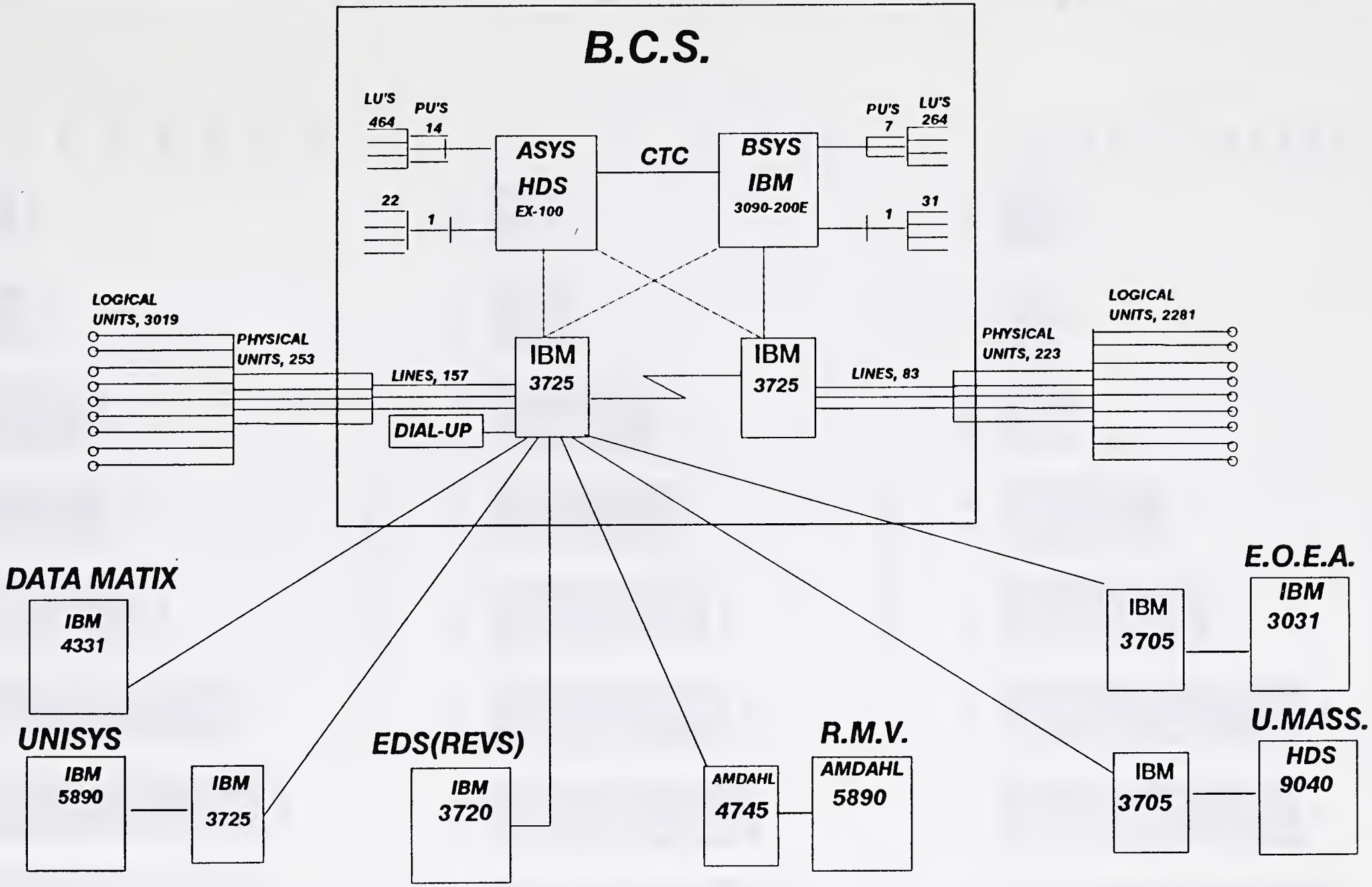

Decreases in Personnel (FTEs)
7/88 - 10/90
400
350
300
250
200
150
100
50
0
7/88
10/88
1/89
4/89
7/89
10/89
1/90
4/90
7/90
10/90
Bond
Budget


Changes in Personnel
7/88 - 10/90
Layoffs
Voluntary Layoffs
Retirements
Resignations
Transfers Out
Deceased
New Hires
Net Decrease (-134)
-140
-120
-100
-80
-60
-40
-20
0
20
40
60


Technical Pay Law
Number of Persons in TPL Positions
All Commonwealth Agencies
7/83 - 7/90
7/83
7/84
7/85
7/86
7/87
7/88
7/89
7/90
0
50
100
150
200
250
300
350
400
450
500


Tax Exempt Lease Purchases
Total Commitments and Avg. Interest Rates
All Commonwealth Agencies
FY 1986 - FY 1991
(Millions)
% Interest Rate
$25
$20
$15
$10
$5
$
9.00%
8.00%
7.00%
6.00%
5.00%
4.00%
3.00%
2.00%
1.00%
0.00%
FY86
FY87
FY88
FY89
FY90
FY91

# BUREAU OF COMPUTER SERVICES NETWORK DIAGRAM

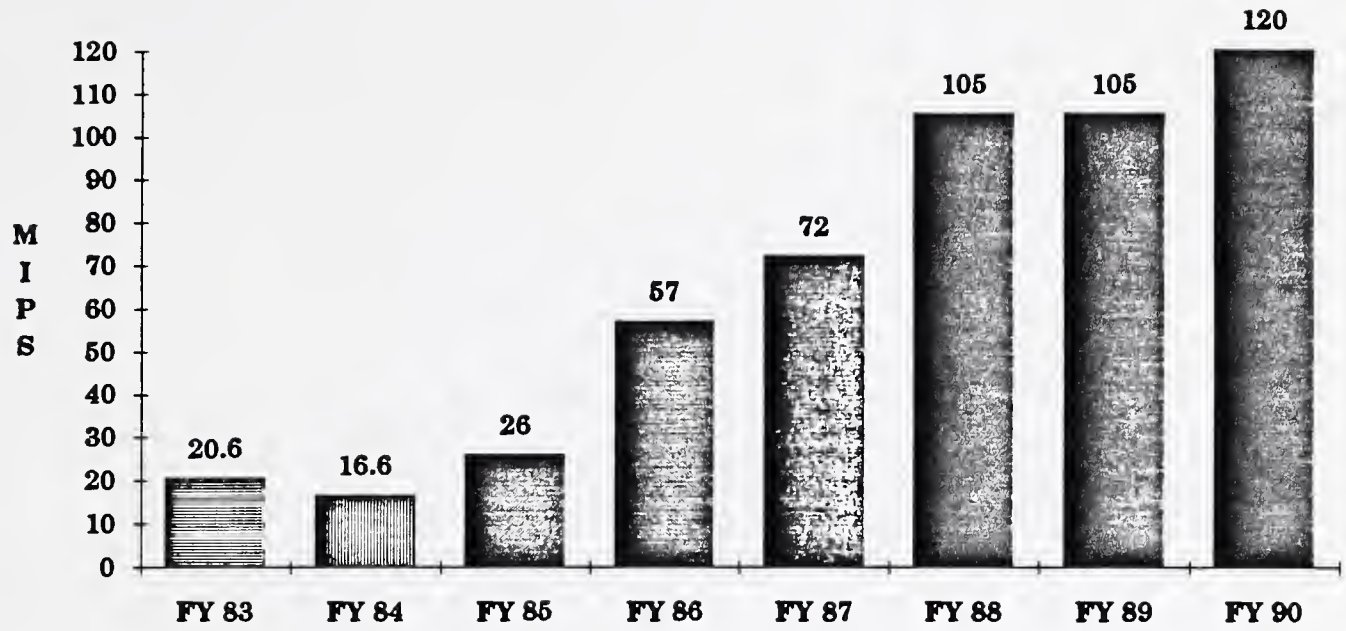



BCS - BUREAU OF COMPUTER SERVICES
SDC - SYSTEM DEVELOPMENT CORPORATION
RMV-REGISTRY OF MOTOR VEHICLES
DATA MATIX - DATA MATIX CONSULTANTS

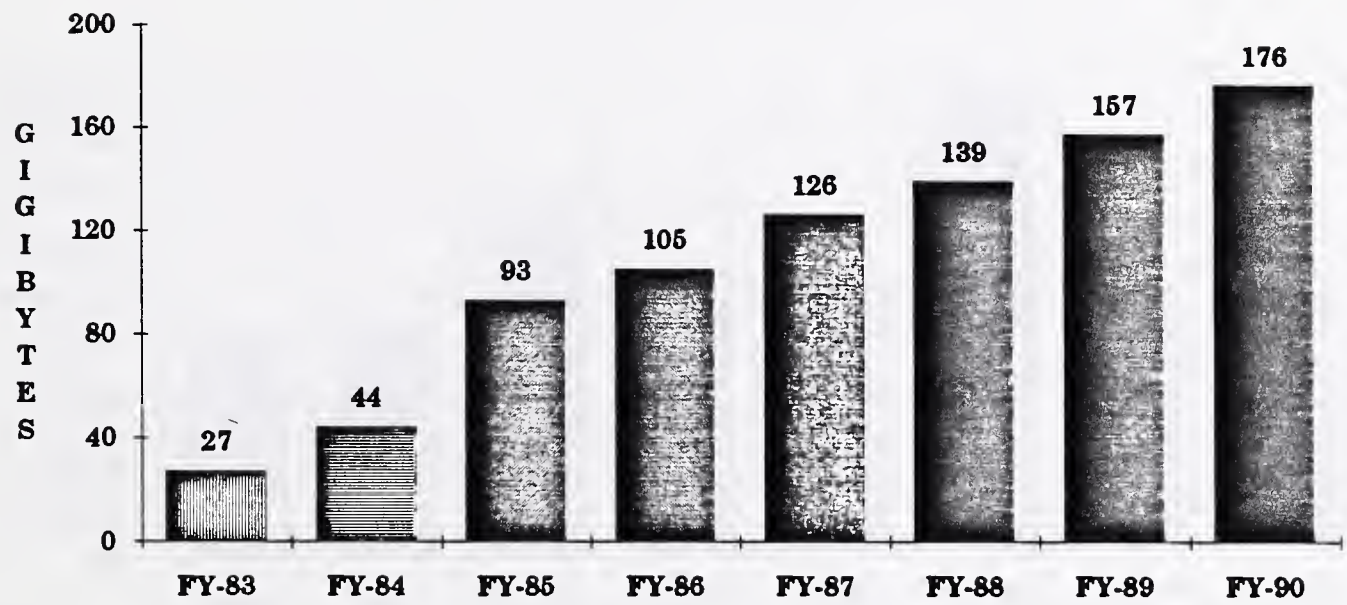
EDS - ELECTRONIC DATA SYSTEMS DULLES
U MASS - UNIVERSITY OF MASSACHUSETTS
EOEA - EXEC. OFF. OF ENVIORMENTAL AFFAIRS

10/23/90

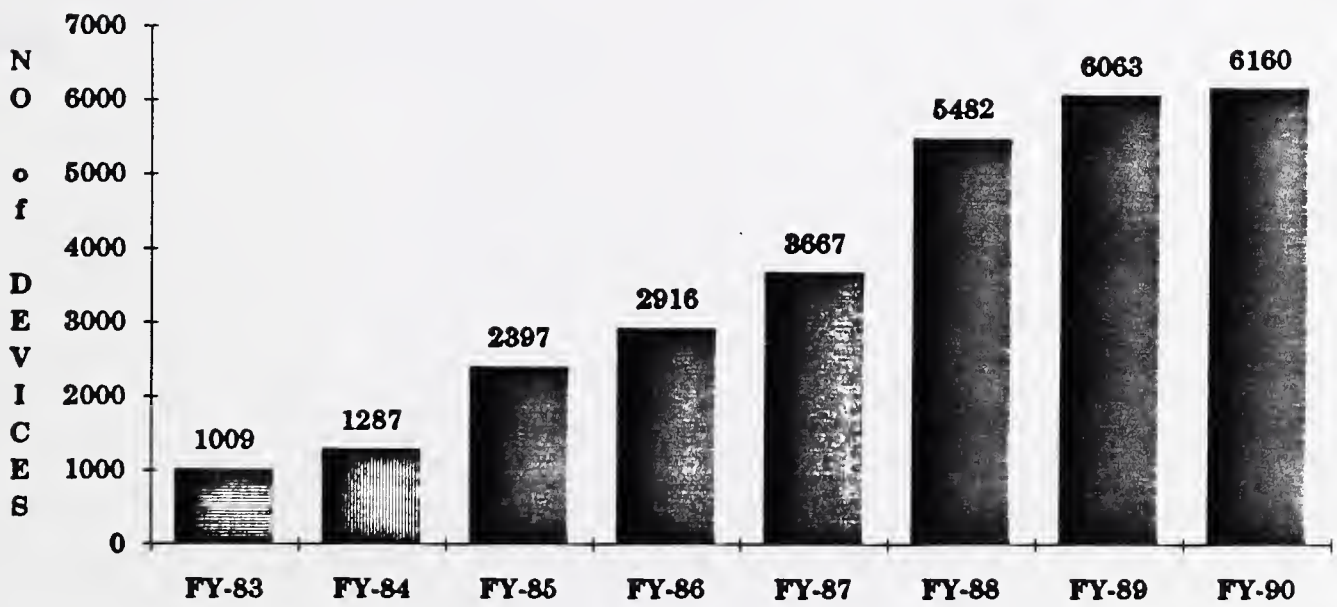
CPU GROWTH IN MIPS



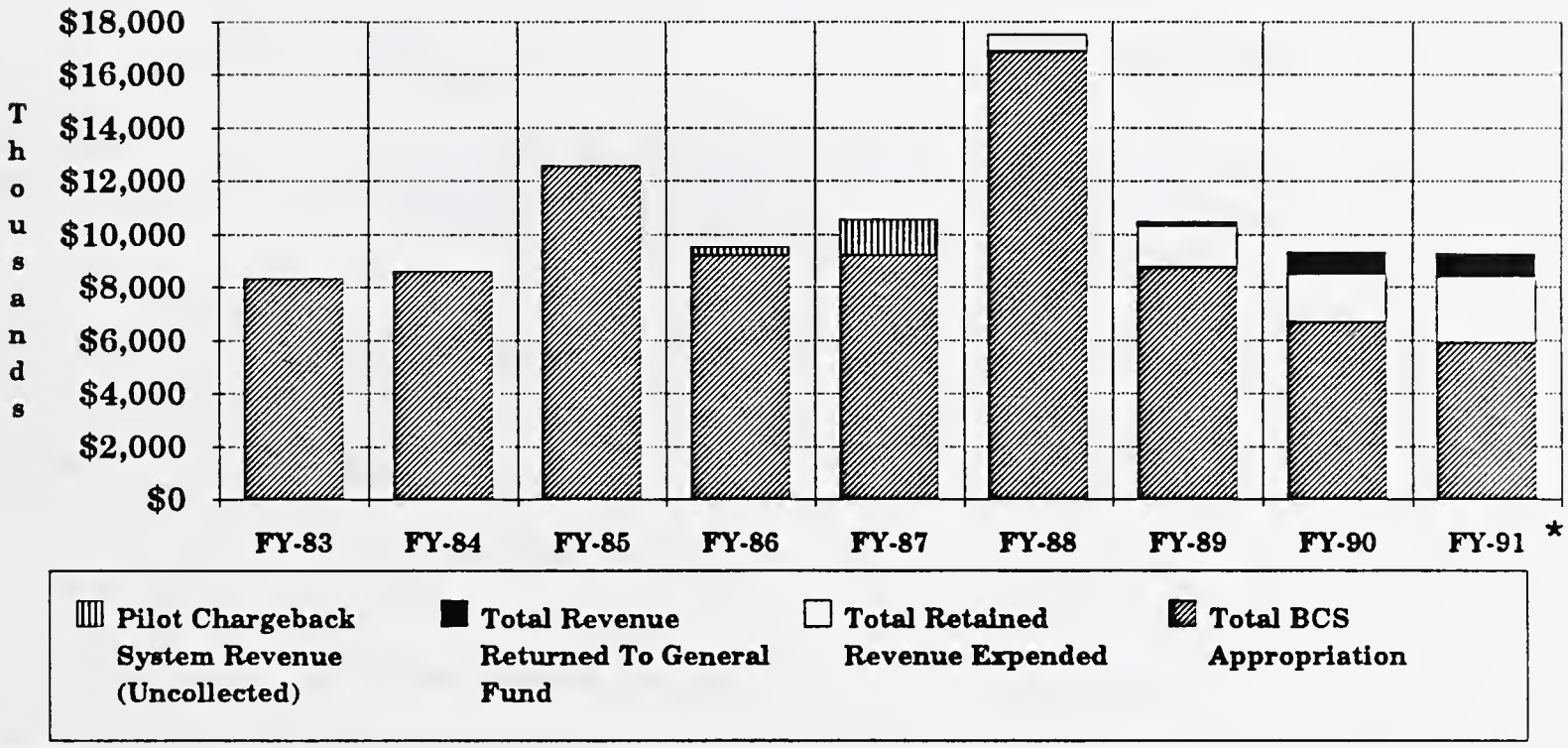

DASD DEMAND




NETWORK GROWTH



***BCS Revenue, Expenditures, and Contribution to the General Fund***




*CHBKRATE*

** Estimated*

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## COMMONWEALTH BLANKET CONTRACTS FOR DATA PROCESSING GOODS AND SERVICES

| CATEGORY | TITLE | START | # OF VENDORS |
|---|---|---|---|
| Cabling | Generic Wiring | March 14, 1990 | 4 |
| Data Communications | Data Communications Equipment (Modems, Multiplexors, Etc.) | November 20, 1988 | 1 |
| Microcomputers | Laptop Computers | March 25, 1988 | 4 |
| | Apple PC's | February 2, 1989 | 3 |
| | Ms-Dos PC's | February 2, 1989 | 5 |
| Microcomputer Networks | Apple's LAN's | March 10, 1989 | 1 |
| | Ms-Dos LAN's | March 6, 1989 | 5 |
| Minicomputers | Departmental Processors | January 2, 1989 | 5 |
| Software | Microcomputer Software | March 1, 1989 | 3 |
| | Project Mgmt. Software | June 10, 1988 | 1 |
| Storage | DASD | February 17, 1989 | 2 |
| | Off-Site Storage | August 1, 1988 | 1 |
| Terminals,Printers Controllers | Unisys/Sperry-Compatible | December 1, 1985 | 2 |
| | Unisys/Burroughs Compatible | February 24, 1986 | 1 |
| | IBM SNA/SDLC Compatible | March 2, 1988 | 3 |
| Client Tracking | DPH/Abacus | July 1, 1987 | 1 |
| Other Contracts | Bar Code Systems | June 13, 1988 | 1 |
| | CADD Hardware, Software Services | April 1, 1988 | 1 |
| | PC-Based Disaster Recovery | June 12, 1989 | 1 |
| | Systems Development | February 6, 1988 | 1 |

## INFORMATION TECHNOLOGY POLICY MEMORANDA

| SUBJECT | PURPOSE | DATE ISSUED |
|---|---|---|
| PROJECT AF-29'S (ADP Policy Memorandum 86-1) | To reduce the number of AF-29 requests, and thereby the number of times Agency Heads, Executive Offices, BSPP and EOAF were required to give approval. | August 28, 1985 |
| NEEDS ASSESSMENT and REQUIREMENTS DEFINITION STUDIES (ADP Policy Memorandum 86-2) | To eliminate the possibility of a conflict of interest or the appearance of a conflict of interest, and to help ensure that needs assessment studies are unbiased. | August 28, 1985 |
| DATA COMMUNICATIONS (ADP Policy Memorandum 86-3) | To build bridges between the Commonwealth's data centers so that as technology improves, any of the state's data centers will be able to function as a gateway to any other state data center. | March, 1986 |
| GENERIC WIRING SYSTEMS (ADP Policy Memorandum 87-1) | To achieve significant savings of time and money when an agency requires the movement or addition of terminals, or a change from one vendor to another. | September, 1986 |
| TAX EXEMPT LEASE POLICY (TELP) for DATA PROCESSING HARDWARE AND SOFTWARE (ADP Policy Memorandum 88-1) | To clarify OMIS's policy regarding the types of data processing items that can be leased-purchased under a TELP agreement , to meet periodic agency requests. | July 1, 1987 |
| SOFTWARE COPYRIGHT COMPLIANCE (ADP Policy Memorandum 88-2) | To educate software users in their responsibilities for complying with copyright laws and in the procedures the Commonwealth has introduced to enforce compliance with these laws. | April, 1988 |
| SECURITY for MICROCOMPUTER DATA AND EQUIPMENT (ADP Policy Memorandum 88-3) | To educate microcomputer users and their managers in their responsibilities for protecting the Commonwealth's equipment, software programs, and stored information from accidental loss, unauthorized use, and theft. | April, 1988 |
| MICROCOMPUTER SOFTWARE DEVELOPMENT (ADP Policy Memorandum 88-4) | To educate managers in their responsibilities for identifying and managing microcomputer development projects within their area of responsibility. | April, 1988 |

Office of Management Information Systems
Executive Office of Administration and Finance

# TRANSITION REPORT

## VI. Future Directions, Impact of Cuts

### Bureau of Systems Services (BSS)

The goal for BSS is to develop, maintain, and support automated administrative systems for use by executive departments. There is much to be done; there are huge gaps in the basic infrastructure required to adequately manage state government. Strategic use of information technology will remain a dream until certain fundamental systems, such as Budget Preparation and Non-Tax Revenue Accounts Receivable (NTR/AR) are implemented.

BSS's core strategy is to work with senior administrative officers to seek out opportunities for service consistent with BSS's mission and which promise significant benefit to the Commonwealth.

All project work within BSS is initiated by requests from the user community, prioritized by the appropriate steering committee and made active when resources from BSS and the user department are available to support the effort.

Attached are the planning models for BSS projects planned through February, 1991. The plans are aggressive and clearly reflect overcommitted resources. Not included are the 31 full-time equivalents (FTEs) required to maintain and support existing systems. The project request backlog is significant and represents approximately 3 years of work based on existing staffing levels.

The amount of possible software development work is limited only by the number of resources available and BSS's ability to manage the projects. Additional budget cuts will mandate less development. Currently only 46% of BSS's resources is available for enhancing existing systems or developing new software.

The benefits of the work BSS does is tangible and significant. Before PMIS people were not paid accurately. Before MMARS chaos reigned in the accounting systems and bill paying was a nightmare. Current projects focus on efficiencies such as the decentralized audit for DPA, money savings via programming analysis reports for the telecommunications audit, essential programmatic functionality with NTR/AR, services such as the Dependent Care Assistance Program (DCAP) and much more. Continuation of these efforts and other critical project work is vital to the health and stability of the Commonwealth.

### Bureau of Computer Services (BCS) -- OMIS Data Center

Fiscal constraints are making it difficult for BCS to meet customer demand. Although chargeback revenue substantially increases BCS's ability to expand to meet demand, reductions in appropriations have meant that only about $0.25 of every chargeback dollar can actually be used to fund increased demand for services. Eventually new customers and applications will have to be turned away, despite chargeback revenues. Anticipated further reductions in force this fiscal year will require BCS to close its Records Management Center in Westborough, forcing customer agencies to procure more expensive services outside.

Data center consolidation is the most viable alternative for keeping the Commonwealth's data processing costs down, and retaining state of the art technology at affordable prices for customer agencies. Consolidaton of the Registry of Motor Vehicles data center with the OMIS Data Center would substantially aid in this effort.

A single, statewide data and voice communications network must be implemented. Network equipment now owned by customer agencies (circuits, modems, etc.) needs to be consolidated under the control of the OMIS data center to achieve further cost savings by optimizing the use of circuits and modems among all user agencies. Network disaster recovery must also be planned for implementation as soon as possible.

Space and environmental constraints at the Data Center's One Ashburton Place location make relocation to a more spacious facility outside of Route 128 a very attractive alternative. Data center growth is now limited by current space. This is an

especially critical issue in the light of the need for data center consolidation, and movement toward shared facilities.

The OMIS chargeback system also needs to be amended to move toward a zero-based budget, through the elimination of credits and "unbillable" status for user agencies that the data center currently cannot bill.

**Office of Technology Planning (OTP)**

Since January, 1990, when OTP was created, OTP has lost four professional staff members (30%). Due to budget cuts, these positions have not been refilled.

The loss of these technical staff people has resulted in the following problems:

1. Elimination of Departmental Systems Consulting. OTP has not been able to provide technical consulting or assistance to agencies with departmental systems.

2. Elimination of Cost Benefit Analyses. OTP has also not been able to work with agencies on cost benefit analyses of the various alternative information systems available to them.. In the past OMIS provided analyses on Buy versus Make, and Departmental versus Mainframe-based.

3. Reduced Agency Planning. OTP is able to provide only minimal planning assistance to agencies. Presently this assistance is directed at the Commonwealth's most severe problems (e.g., Medicaid and other assistance programs).

**Bureau of Technical Education (BTE)**

There is a recognized need for BTE to continue to provide its basic services: professional staff development, data center user support, local area network user support, application training, and continuing education for agency MIS directors and their senior staffs. It is essential, despite staff reductions and limited resources, that BTE keep enough of a core in place to provide critical services.

The greatest need in the Commonwealth is that BTE provide more training in the use of personal computers, and in personal computer networking and applications. This effort would parallel the role BTE plays with data center clients: providing a centralized place to learn from working professionals. Centralizing training services also makes tremendous sense because it efficiently utilizes training materials, facilities, and administrative costs. It also builds upon the groundwork OMIS has built in other areas, providing "one stop shopping" for technical expertise and assistance.

BTE is now down to the barest essentials needed to keep its core program. Any further cuts will result in the elimination of a major initiative. As it stands now, even staff absences impact the timeliness and efficacy of BTE's efforts.

BTE's biggest fiscal concern is replacing classroom equipment. In the next year, the personal computers will need to be replaced with models that can support the new "Windows" environment. If BTE is to continue to support presentation/publication technology BTE will also have to acquire a Macintosh II.

October 1990

BSS PLANNING MODEL
Projects FY 1991
**(Active/Planned Projects)**

| No. | Priority | Primary Owner | Project | Status | Oct | Nov | Dec | Jan | Feb |
|---|---|---|---|---|---|---|---|---|---|
| **Departmental Systems** | | | | | | | | | |
| 1 | A | DET | Universal Health Insurance - Phase I | In Progress | 5.5 | 5.5 | 4.5 | 4.5 | 4.5 |
| 2 | C1 | REG | Develop Cash Balance Function | Planned | 0.5 | 1 | 1 | 1 | 1 |
| 3 | C2 | REG | Applicant Tracking System | In Progress | 0.5 | 0.5 | 0.5 | | |
| 4 | C3 | TEL | N. E. Tel. Audit | Planned | 1 | 1 | 1 | 1 | 1 |
| 5 | C4 | REG | Automate Invest. Status Reporting | Planned | | | | 1 | 1 |
| **Financial Systems** | | | | | | | | | |
| 1 | A | OSC | NTR Accounts Receivable | In progress | 1 | 2 | 2 | 3 | 3 |
| 2 | A | MIS | Disaster Recovery - MMARS | On-going | 0.25 | | 0.25 | 0.25 | |
| 3 | A | OSC | FY'90 Close - MMARS | In progress | 0.5 | 0.5 | 0.5 | 0.5 | |
| 4 | B1 | PGS | Partial Bid Awards | In progress | 0.75 | 0.5 | | | |
| 5 | B4 | OSC | Higher Educ. Non-Approp. Funds - Phase II | In progress | 0.5 | 1 | 0.5 | | |
| 6 | B6 | A&F | CBARS Procurement Plan | In progress | 2 | 2 | 1 | | |
| 7 | C1 | OSC | Intra-governmental Encumbrance | In progress | 1 | 1 | 1 | 1 | |

October 1990

BSS PLANNING MODEL
Projects FY 1991
**(Active/Planned Projects)**

| No. | Priority | Primary Owner | Project | Status | Oct | Nov | Dec | Jan | Feb |
|---|---|---|---|---|---|---|---|---|---|
| **Human Resource & Payroll Systems** | | | | | | | | | |
| 1 | A | ANF | PARIS Extracts - CAPS/PMIS | In Progress | 2 | 2 | 2 | 2 | 2 |
| 2 | A | ANF | PARIS Support & Consultation - PMIS | Ongoing | 1 | 1 | 1 | 1 | 1 |
| 3 | A | ANF | PARIS Support & Consultation - CAPS | Ongoing | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| 4 | A | ANF | DCAP - CAPS | In Progress | 2 | 3 | 3 | | |
| 5 | A | OSC | Modify CAPS Accounting Process - FY91 | In Progress | 0.5 | 0.5 | 0.5 | 1 | 1 |
| 6 | A | OSC | Modify PMIS Accounting Process - FY 91 | In Progress | 0.5 | 0.5 | 0.5 | 1 | 1 |
| 7 | B1 | DPA | Decentralized Audit-Release 1 | In Progress | 1 | 1 | 1 | | |
| 8 | B2 | MIS | Natural 2 Conversion - CAPS | Planned | | | | 2 | 2 |
| 9 | B3 | DPA | Decentralized Audit - Release 2 | Planned | | | | 1 | 1 |
| 10 | B4 | MIS | Natural 2 Conversion - PMIS | Planned | | | | 0.5 | 0.5 |
| 11 | B7 | MIS | Rewrite PMIS Reports Manual - Report | In Progress | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |

October 1990

BSS PLANNING MODEL
Projects FY 1991
**(Active/Planned Projects)**

| No. | Priority | Primary Owner | Project | Status | Oct | Nov | Dec | Jan | Feb |
|---|---|---|---|---|---|---|---|---|---|
| **PARIS** | | | | | | | | | |
| 1 | A | | Reload | | 2 | | | | |
| 2 | A | | Load History | | 0.75 | 0.25 | | | |
| 3 | A | | Dept. Security | | 1 | 2 | 1 | 0.5 | |
| 4 | A | | Higher Ed | | 0.5 | 1 | 1 | 0.5 | |
| 5 | A | | Data Validation | | 2 | 1 | 1 | 0.5 | |
| 6 | A | | Improve System Performance | | 0.5 | 0.5 | 0.5 | | |
| 7 | A | | Category Y - Release 2 | | | 1 | 1 | 1 | |
| 8 | A | | Ad Hoc Reporting | | | | 2 | 2 | 2 → |
| 9 | A | | Projected Payroll | | | | | 1 | 1 → |
| | | | Resources Needed | | 28 | 29.5 | 27.5 | 27 | 22.75 |
| | | | Resources Available | | 23.25 | 25.75 | 24.75 | 26.25 | 26.75 |
| | | | Variance | | -4.75 | -3.75 | -2.75 | -0.75 | 4 |

Office of Management Information Systems
Executive Office of Administration and Finance

# TRANSITION REPORT

## VII. Recommendations

OMIS's general recommendations are listed first, followed by recommendations specific to each OMIS bureau.

### General Recommendations

The following recommendations constitute the major recommendations of OMIS's "Information Technology Plan for the 1990's".

1. **Governor's Committee.** Empower the current Governor's Advisory Committee on Information Technology by giving it selected review and approval responsibilities.

2. **CIO.** Have the Governor appoint a Chief Information Officer (CIO) who would report to the Secretary of Administration and Finance, serve as a member of the revised Governor's Committee, and take responsibility for implemention of the recommendations and initiatives of the Information Technology Plan, once the current draft is finalized.

3. **Information Technology Plan.** Have the CIO review and finalize the "Information Technology Plan", so that it reflects the program priorities of the new administration. (Because the draft Plan is in written form, its initiatives are not reiterated below in the following bureau-specific recommendations.)

### Bureau Recommendations

**Bureau of System Services (BSS)**

1. Maintain the Executive Steering Committee to provide high-level priority setting, and review and approval of all BSS projects. Membership consists of the Budget Director, the Comptroller, the Undersecretary of Administration and Finance, and the Director of OMIS.

2. Continue the Steering Committee process for driving priorities and project work. Currently committees exist for departmental systems, financial systems, human resource and payroll systems, and PARIS.

3. Staff and support key projects such as the Budget Preparation System and the Compensation Management System at both the user and BSS levels.

4. Run the Programmer Training Program annually.

5. Establish a chargeback mechanism for BSS using a retained revenue account that allows staff to be hired on retained revenue to support key development efforts.

6. Develop an incentive plan for rewarding project completions, referral of experienced technical professionals, and outstanding performance.

7. Enable BSS to take full advantage of current advances in the area of computer-assisted software engineering.

8. Create a software development unit whose primary responsibility is the development of network-capable personal computer-based applications under the "Windows" and "OS/2" operating systems, using emerging application development technologies.

**Bureau of Computer Services (BCS)**

1. Consolidate the RMV Data Center and the OMIS Data Center under BCS.

2. Move the consolidated data center to a site outside Route 128 (e.g., the Grafton State Hospital area identified by DCPO in a recent study of potential sites for operational centers).

3. Refine the Data Center chargeback system (zero-base, no credits, no "unbillable" agencies).

4. Move to full-scale automation of operations (a so-called "lights out", or "dark" data center).

5. Enhance disaster recovery to include all critical applications, and enter into negotiations to obtain access to a "cold" site.

6. Maintain "state of the art" technologies where cost effective, and where supported by customer need.

7. Expand the type of mainframe resources the Data Center provides customer agencies.

8. Build a single, statewide, voice/data telecommunications network that encompasses all data center networks, including OMIS's.

9. Install disaster recovery capabilities for the network.

10. Encourage BCS to offer non-traditional computer resources, i.e., to broaden BCS's base from traditional mainframe-based resources to make selected minicomputer and personal computer-based resources available for its customer agencies.

**Office of Technology Planning (OTP)**

1. Include OMIS in the review and approval of agency budget requests for information technology goods and services, including requests for capital funds.

2. Establish a chargeback system to support OTP management of the wide area network, and to make it possible for OTP to manage agency local area networks when requested to do so.

3. Add staff to OTP to assist with the on-going telecommunications audits.

4. Add personnel to OTP allow it to provide technical consulting to other agencies, including cost-benefit analyses of technical alternatives.

**Bureau of Technical Education**

1. Promote the sharing of training resources, whether instructors, classrooms, software, expertise, or administrative support.

2. Implement an instructor rotation program that allows agency in-house experts to teach classes.

3. Prepare introductory manuals for each statewide system (PMIS, MMARS, PARIS, CAPS, etc.) to assist new agency personnel during the coming transition.

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# TRANSITION REPORT

## VIII. Executive Summary

**The Past.**

During the past eight years, OMIS has achieved a number of significant goals:

* It submitted legislation, now called the Technical Pay Law, that has enabled OMIS and other agencies to offer competitive salaries, and thereby to attract and retain technical professionals. The Governor's Advisory Committee on Information Technology provided critical support for this effort.

* It reduced its use of technical consultants by over 90%, from $3,658,150 in FY1983 to $306,708 in FY1990.

* It provided the executive branch with the key administrative systems which any multi-billion dollar enterprise must have:

  An on-line, integrated personnel/payroll system (PMIS)
  An on-line accounting and accounts payable system (MMARS)

  A number of states still have separate personnel and payroll systems, with the attendent problems that the lack of their integration causes, and more than several states are just now implementing centralized, on-line accounting systems, more than four years after Massachusetts..

* It put over 20 blanket contracts in place to facilitate the procurement of data processing goods and services, and to provide prices significantly below list. These contracts were used by Commonwealth agencies, authorities, cities, towns, and other governmental entities. They saved time, allowed agencies to grow with compatible equipment, and gave vendors a major incentive to provide good service in order to get repeat business, as well as provide significant discounts. Since 1986, OMIS's blanket contracts yielded prices $14 million below list.

* It provided resources that proved necessary to make sure that the Registry of Motor Vehicles got a modern, on-line driver license, motor vehicle registration system. With the new system, the Registry was able to reduce its lines significantly, implement a mail-in renewal program, enforce license suspension laws for the first time, and build an award-winning extension that will significantly reduce the number of uninsured motorists in the Commonwealth.

* It audited five years of telephone bills, and presented evidence to the telephone company that yielded over $6.4 million dollars in credits for overbillings, and on-going annual savings of over $1.0 million.

* It converted a data center with a deservedly poor reputation into a well-run, professionally managed data center. The data center now provides many times the services it provided in 1983 at proportionately less cost. In addition to a chargeback system that enables the data center to respond quickly to user agencies's needs, the center has added disaster recovery for critical systems, global security, emergency

generators, systems that automate much of the routine operations, and professional database administration. During this period, the data center also ended its sole dependence on one hardware vendor, put its mainframe procurements out to bid, and saved several million dollars by doing so.

* It established a technical education unit whose job included making sure that OMIS's technical employees had the minimal skills required to do their jobs.

* It has provided technical assistance to many agencies, helping them choose appropriate, cost-effective hardware and software, and implement major systems, including a case-tracking system in all of the district attorneys offices, a hospital billling system for the Departments of Public Health and Mental Health, a personal computer-based system for the Women, Infants and Children program, and a correspondence system for the Governor's Office.

* To help ensure coordinated development of geographic information systems in the Commonwealth, OMIS started a coordinating committee that has grown rapidly, and now has representation from many state agencies, cities and towns, educational institutions, both public and private, and the vendor community.

* OMIS has worked with the Governor's Advisory Committee to prepare Massachusetts's first statewide Information Technology Plan, and has a draft version prepared for transmittal to the new administration.

* It has developed and maintained much needed software systems for a number of executive branch departments, including a Universal Health Insurance billing system for the Department of Employment and Training, a capital projects management system for the Department of Capital Planning and Operations, and a case tracking system for the Division of Industrial Accidents. Without OMIS's help these agencies would have had to turn to outside consultants at a significantly higher cost to the Commonwealth.

**The Future.**

In addition to the many initiatives in its Information Technology Plan, OMIS's primary recommendations are the following:

* The Governor's Advisory Committee should be converted from an advisory body into a group with selected review and approval authority regarding information technology initiatives in the executive branch.

* The Governor should appoint a Chief Information Officer, who would report to the Secretary of Administration and Finance (as recommended by the Crozier Commission), along with Chief Officers for finance, human relations, and operations.

* The CIO should be empowered to finalize the Information Technology Plan, to make its initiatives reflect the priorities of the new administration, and then to implement those initiatives.